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ABSTRACT

This document addresses the recommendation regarding community adult education information services in California's 1989 Strategic Plan for Adult Education. It presents an analysis of the state of the art, the nature of the California model, and four policy proposals to help guide its development. Chapter 1 offers a history and summary of the recommendation and lists its objectives. Chapter 2 is a review of relevant literature. Chapter 3 covers options for implementing the recommendation, including: policy issues and options, an overview of options, criteria for evaluation of options, and a comparison of pros and cons of the alternative approaches. Chapter 4 contains the four policy proposals. (CML)

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COMMUNITY ADULT EDUCATION INFORMATION SERVICES

Policy Option Paper on Strategic Recommendation 3

First Edition
August 17, 1990

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AEI Adult Education Institute for Research and Planning

Community Adult Education Information Services

Policy Option Paper on Strategic Recommendation 3

First Edition
August 17, 1990

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Letter of Transmittal

Community Adult Education Information Services is one of fourteen recommendations set forth in the ***Adult Education for the 21st Century: Strategic Plan to Meet California's Long-Term Needs.*** It addresses the need for comprehensive, impartial and readily available information about learning opportunities and to assist adults in selecting programs which meet their needs.

This policy options paper discusses (1) the recommendation, (2) related research and models which help elaborate on the information services system, (3) initial policy issues and options, and (4) our proposals.

Based on this discussion, the Interim Steering Committee Members, its sub-committees, and leaders in the adult education programs and other interested persons can help us elaborate on and refine the proposals.

Sincerely,

Dennis Porter
President, Micro Methods

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The contents of this paper do not necessarily reflect the views or the following persons or institutions they represent:

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This paper has been prepared under Contract 7147 from the Adult Education Unit of the Youth, Adult and Alternative Educational Services Division of the California Department of Education.

PMRA

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This paper has been prepared to summarize background information and outline possible policy decisions. The contents of this paper do not necessarily reflect the policies of the California Department of Education, Community Colleges, Interim Adult Education Steering Committee, or other institutions.

FIRST EDITION – August 1990

Executive Summary

The Community Adult Education Information Services recommendation addresses the need for cross agency information about available learning programs and services in the community. It combines the demand for an electronic cross agency information broker at one or more locations with the provision of outreach, intake, assessment and guidance services. This paper presents an analysis of the state of the art, the nature of the California model and four policy proposals to help guide its development.

This paper addresses the need for and basic considerations in the design of a Community Adult Education Information Services system. It is one of fourteen option papers addressing the recommendations proposed in California's 1988-89 *Strategic Plan for Adult Education*.

The paper is the first of three working papers on Strategic Recommendation 3, ***Community Adult Education Information Services***. Each paper builds on the previous ones. Each is reviewed by a group of selected advisors. The analysis for the policy options paper is guided by background research and policy recommendations for the ***Adult Education for the 21st Century***.

Objective: Isolate Policy Issues and Options

The focal objective of this paper is to isolate options for implementing the proposed community adult education information services that can be assessed in the next stage of development--the feasibility analysis.

The proposed Adult Education Information Services are intended to be combined with recommendations to develop an Integrated Adult Education Data System and a credit-card-like Adult Education Access Card (***EduCard***$_{TM}$), to form the core of a "collaborative infrastructure". Its concept and design has been influenced substantially by the east coast "education brokering" movement and State of Michigan's Human Investment System.

The ***Community Adult Education Information Services*** will provide individuals with assessments of their educational needs and impartial information about all available learning opportunities. This service would provide a clearinghouse that uses state-of-the-art information technology to access existing individual educational records and information about programs. These services could be located in a number of locations

(*e.g.* libraries and counseling centers) as part of a cross-agency computer network. The primary functions of these services would be to:

- Provide individuals with impartial information and guidance concerning the nature and quality of alternative educational programs.
- Publicize available educational opportunities and improve understanding and access to these programs.
- Consolidate guidance, counseling and certification services into central locations for ease of access and cost-effectiveness (some guidance staff may remain at provider sites to provide ongoing services).
- Provide standard assessments of educational needs and certification of demonstrated skills and knowledge (providers may still retain their own assessment and certification procedures).
- Provide "user friendly" resources to access information about programs (*e.g.* application of interactive computer systems with graphics, multi-lingual options and voice control to ease use).
- Develop and maintain cross-agency data concerning the participation trends, learning achievement of individual participants, and available openings in educational programs.

Each service location would be counselor-supported, and provide all adults with the information needed to make intelligent choices about their educational activities. Efforts would be made to attract adults from all walks of life while providing special resources to ensure that educationally "disenfranchised" adults are given the support required to make important educational decisions.

The proposed information-assessment-referral service emphasis hinges on providing the adult learner with up to date information on (1) available services, (2) an assessment of learner's needs, (3) the learner's entitlements and options, and (4) assistance in making informed choices about available education and training.

The proposed *information-assessment-referral* service emphasis hinges on providing the adult learner with up to date information on **(1)** available services, **(2)** an assessment of learner's needs, **(3)** the learner's entitlements and options, and **(4)** assistance in making informed choices about available education and training.

The involvement of employers in this system would offer methods tc create public-private training programs or referrals to existing ones. Other innovative possibilities are suggested. The community adult information services is part of the core of the education and basic skills training system. This services system will combine inter-agency resources to serve the diverse needs and interests of adult learners.

Other Objectives

The community information services system must meet other objectives. It must reliably and accurately maintain information on the service needs, the program environment, available services, learner needs and characteristics and program outcomes. It is expected that the information services will define program performance and will, eventually,

be able to display the expected costs and learning expectations for different types of learners. Likewise as learning moves away from seat time measures of payment and achievement, the system will be able to report performance outcomes.

The need for these information and referral (I&R) services in adult education has grown as the result of important sociological and demographic shifts in the United States. Several of these shifts are projected to continue well into the 1990's. They constitute somewhat discrete markets for learning services. They include:

- Need for Better Educated Work Force
- Need to Reach Alienated Learners
- Growth of Women Workers
- General Need for Educational Access
- Increase in older and disabled workers

To date, there have been few channels for the types of cooperation required for educational brokering. Each community has subsets of service systems that have developed and maintained educational information databases separately. For the most part, educational brokering services have developed in three institutional environments:

- Educational Counseling Services
- Libraries
- Social Agency Referral Services

Five areas of possible cooperation in providing educational brokering services have been identified. These are: (1) directory publication, (2) expert advice, (3) direct provision of information only, (4) direct provision of guidance, information and referral, and (5) computer update and records maintenance. These five areas of cooperation are progressive levels of the same basic service provision. These service activities can be divided into active and passive categories or direct and supportive services.

The successful information services programs have been patient in their design and implementation. They have developed wide community linkages and involved the collaborating programs in the planning and in operations. The importance of involving agencies with a history of innovation and clearly defining the cooperating agencies' roles is stressed.

Identified problem areas in implementing community information services include the (1) lack of financial planning and available resources, (2) the uneven transition from demonstration to institutional programs, and (3) the lack of evaluative research on these programs.

In the descriptive model there are several sets of activities which can be considered the probable domain of the community adult education information services or an information services system. These functions are:

(1) Planning and Describing Programs

- Develop and standardize program descriptions.
- Ongoing updates of information on programs.
- Use of assessment and referral outcome data to evaluate and plan programs.
- Use of program participation and achievement data to evaluate and plan programs.

- Use of post-program follow-up data to evaluate and plan programs.

(2) Maintenance and Use of *EduCard*$_{TM}$ and Integrated Data System

- Establish or update *EduCard*$_{TM}$ and integrated database.
- Provide information about programs and options.

(3) Assessment and Placement of Learners

- Learner checks into information service.
- Interview learner and collect intake information.
- Conduct, update or review assessment of skills and aptitude.
- Review and select program.
- Referral and pre-registration.

At the local level this database will provide current information on (1) needs analysis, (2) services available and provided, and (3) assessments of the services provided. It is this third responsibility which will prove the most troublesome and controversial as it superimposes a common evaluative structure on the delivery of education and basic skills training related services. However, without this information, it is almost impossible to determine whether the services are impacting the needs and whether the service providers are indeed delivering services effectively. The addition of this evaluative function closes the planning and analysis loop to permit self-appraisal and cross-agency appraisal regarding needs versus services versus outcomes.

Employer related information should be an information services component. Job listings, special orientation programs, listings of education and skill requirements, and public-private training ventures should be included.

Research to date does not provide a close model to emulate. Developmental work being done in Michigan and possibly New Jersey will offer some guidance, as will the Monroe county, New York and San Mateo counties information services systems. However, our inclusion of outreach as an I&R function and the requirement for a quite detailed and explicit set of provider data, makes the California model stand somewhat alone.

Policy Issues and Options

The development issues and options discussed are:

- Level of Centralization
- Funding Responsibility
- Recruitment of Learners
- Level and Nature of Staffing and Technology

These issues are selected because they must be examined before additional feasibility analysis can move forward. Readers are encouraged to identify other issues and options for inclusion during the advisory process. There are four basic issues identified which begin to define the

features of the community information services. With each issue several options are presented, with the understanding that they could stimulate other issues and options. They are:

Issue 1: Community Information Services System Model

(1) Centralize the Information System - *Centralize all the functions with one sponsor.*

(2) Centralize Information Services and Decentralize Assessment, Placement and *EduCard*$_{TM}$ Issuance - *Centralize the information services and decentralize the other functions.*

(3) Let Local Stakeholders Decide - *Set the overall goals and standards and let the local stakeholder groups decide.*

Issue 2: Funding Community Information Services

(1) New State Legislation

(2) Assess Stakeholders Proportionately

(3) Seek Research and Development (R&D) Funding

(4) Make Stakeholders Responsible, but Assess for Information and Referral, and Computer Database

Issue 3: Encourage Proactive Outreach

(1) Centralize Outreach

(2) Decentralize the Outreach Activities

(3) Let Local Stakeholders Decide

Issue 4: Determine the Level and Nature of Staffing and Technology

(1) Low Staff/High Tech

(2) High Staff/High Tech

(3) High Staff/Low Tech

Four staff proposals are made to refine the community information services design. A balance is struck to select options that are effective, cost efficient and acceptable to stakeholders. The evaluation criterion reflect this balance. The importance of learner privacy is stressed as a criterion, but does not impact the proposals at this point.

Policy Proposals

Initially four proposals have been made. Upon review by the Data and Information Subcommittee of the Interim Steering Committee the proposals were revised and expanded to seven. The proposals are set forth in **Exhibit 1** and discussed in detail in the policy options paper.

Exhibit 1
PROPOSALS FOR DEVELOPING THE COMMUNITY INFORMATION SERVICES SYSTEM

(1) **Create a state-local community information services system with options for local augmentation.**

(2) **Centralize community information services management and maintenance under one agency subject to stakeholder guidance.**

(3) **Seek research and demonstration funds to begin to implement the model.**

(4) **Enable local stakeholders to determine their approach to outreach.**

(5) **Adopt a community information system the an appropriate mix of staff and technology.**

(6) **Design the community information services to serve the needs of our diverse language and cultural communities.**

(7) **Adopt and adapt the process of the CDE career assessment model.**

The next step is to research the feasibility of developing the community information services system. Feedback from the Steering Committee and the agency administrators will guide us. In particular we will continue to refine the issues and analysis by:

- Continuing to research viable models and elaborating its features.
- Examining the technical feasibility of the system.
- Assessing the usability and political feasibility of the model.
- Detailing legal and statutory issues and conditions.
- Defining the costs of the development and operations of the model within a five year context.

The policy option paper for Recommendation 3 elaborates on these main points in describing and refining the community information services system. It should be read carefully to fully understand the model and its robust characteristics.

Chapter 1

Introduction and Overview

Learners need a comprehensive, impartial and easy to use information service that provides skill assessments, counseling, and a comprehensive overview of available education and training services.

This paper addresses the need for and basic considerations in the design of a Community Adult Education Information Services system. It is one of fourteen option papers addressing the recommendations proposed in California's 1988-89 *Strategic Plan for Adult Education.*

This paper is the first of three working papers on Strategic Recommendation 3, ***Community Adult Education Information Services***. Each paper builds on the previous ones. Each is reviewed by a group of selected advisors. The analysis for the policy options paper is guided by background research and policy recommendations for the ***Adult Education for the 21st Century***. Two other documents provide a background for this paper:

California State Plan for Adult Basic Education, Adult Education Unit, Division of Youth, Adult and Alternative Educational Services, California Department of Education, June 9, 1989

This plan sets the parameters for the *Strategic Plan* implementation over the next four years.

Workplan for Local Planning Consortia, Adult Education Institute for Research and Planning, *Adult 2000 Project*, January 2, 1990 (Draft).

This paper outlines the specific steps to design and implement the *Strategic Plan* and the selection of demonstration consortia sites.

These papers and plans are referenced in the report. Readers are encouraged to review these documents for a more complete background on the topic and the two related papers.

At the onset, it is important to emphasize that the plans and guidelines put forth in this paper are not intended to create a

monolithic administrative structure that would inhibit innovation and responsiveness at the local level. Rather, they are presented to allow educational providers to maintain their own mission and identity while participating in the development of a collaborative infrastructure of common procedures, performance measures, financial incentives and decision making mechanisms that use market mechanisms to allow learners and community stakeholders to build upon existing program successes.

The long-term goal is to improve the content and delivery of educational services to adults who wish to pursue learning through institutions other than four year colleges and universities.

This paper is organized into four chapters. These chapters are as follows:

(1) Introduction and Overview of Recommendation
(2) Review of Literature and Information
(3) Options for Implementing Recommendation
(4) Proposals and Future Actions

The focal objective of this paper is to isolate options for implementing the proposed Community Adult Education Information Services that can be assessed in the next stage of development--the feasibility analysis.

This chapter will provide a history and summary of Proposal 3, explain how the information service would function as part of a "collaborative infrastructure", and specify objectives for the recommendation.

History and Summary of the Recommendation

The recommendation for community adult education information services comes from a long-term planning process initiated in October 1988 by the Adult Education Unit of the Youth, Adult and Alternative Educational Services (YAAES) Division of the California Department of Education (CDE). It was developed under the guidance of a twenty-six member Adult Education Advisory Committee appointed by State Superintendent of Public Instruction Bill Honig. Their charge was to develop a long-term vision of adult education in the 21st century.

The proposed *Adult Education Information Services* are intended to be combined with recommendations to develop an *Integrated Adult Education Data System* and a credit-card-like

Adult Education Access Card (***EduCard***$_{TM}$), to form the core of a "collaborative infrastructure". Its concept and design has been influenced substantially by the east coast "education brokering" movement[1] and State of Michigan's Human Investment System.[2]

The exact text of Recommendation 3, as it appears in the full-length version of ***Adult Education for the 21st Century***, is as follows:

There is an urgent need to provide adult learners with comprehensive, impartial and easily accessible information about available educational opportunities and help learners choose programs that best meet their needs. Most communities have many excellent educational programs. But users of adult education, whether they be individuals or businesses, are commonly lost when they seek an overview of available programs and information about the quality of programs and how they serve specific needs. Further, many adult learners are frustrated because they do not receive adequate assessments of their learning needs to help them choose among alternative programs. As a result, the value and ultimate performance of existing programs is being undercut by the inability of users to find the program that best suits their goals.

The role of the ***Community Adult Education Information Services*** will be to provide individuals with assessments of their educational needs and impartial information about all available learning opportunities. This service would provide a clearinghouse that uses state-of-the-art information technology to access existing individual educational records and information about programs. These services could be located in a number of locations (*e.g.* libraries and counseling centers) as part of a cross-agency computer network. The primary functions of these services would be to:

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[1] Betty Turock, "The Education Brokering Movement," School of Library and Information Services, Rutgers University, New Jersey, December 1989.

[2] The idea for a Community Adult Education Information Services system was in part, modeled after the Human Investment System currently under development in the State of Michigan. Under leadership from the Governor, Michigan had created a Cabinet Council of Human Investment to implement a "demand driven" investment of human resource development system in response to research indicating that the state was facing serious problems in providing an educated and trained workforce. An Adult Literacy Task Force had found a maze of programs and resources with differing intake polices, eligibility policies and outcome criteria. It recommended polices to coordinate services and enable the learner to make choices on how and when to obtain basic skills training and education. Central to the Michigan system are (1) the integration of human service delivery programs, (2) a statewide information services system, and (3) an integrated data system which features the use of a learner's individual smart credit card to maintain his or her service information. One of the early products has been a directory of job training and related services that identifies state and local, by county, agencies and programs that have official responsibilities with the some 60 job training programs in the state. Participant categories are identified by icons for quick recognition (***Creating a Human Investment System: Report to the Governor***, Michigan Job Training Coordinating Council, March 1989; ***The Michigan Human Investment Fund and the Michigan Opportunity Card***, State of Michigan, January 1989; and ***Investing in People: A Directory of Michigan's Job Training and Related Services***, Governor's Office for Job Training, Vol. 4, 1988).

- Provide individuals with impartial information and guidance[3] concerning the nature and quality of alternative educational programs.
- Publicize available educational opportunities and improve understanding and access to these programs.
- Consolidate guidance, counseling and certification services into central locations for ease of access and cost-effectiveness (some guidance staff may remain at provider sites to provide ongoing services).
- Provide standard assessments of educational needs and certification of demonstrated skills and knowledge (providers may still retain their own assessment and certification procedures).
- Provide "user friendly" resources to access information about programs (*e.g.* application of interactive computer systems with graphics, multi-lingual options and voice control to ease use).
- Develop and maintain cross-agency data concerning the participation trends, learning achievement of individual participants, and available openings in educational programs.

Each service location would be counselor-supported, and provide all adults with the information needed to make intelligent choices about their educational activities. Efforts would be made to attract adults from all walks of life while providing special resources to ensure that educationally "disenfranchised" adults are given the support required to make important educational decisions.

Recommendation 3
ADULT EDUCATION INFORMATION SERVICES

Establish local centers linked to a "user friendly" computer network to provide individuals with:

- Impartial and comprehensive information about the availability and quality of educational programs.
- Assessments of individual educational needs.
- Assistance in choosing and enrolling in the program that best meets individual needs.
- Linkage to a statewide computer network to facilitate transfer of individual records to new locations.

These services should be available through existing facilities such as libraries and school guidance centers.

[3] Guidance refers to the process of assisting learners in understanding and making decisions regarding program options. The guidance process is facilitated by the program, labor market, and other information available in the community information services system.

Additional benefits would also come from these services. First, use of such services should increase the quality of educational decisions, and thereby reduce provider expenses resulting from course changes and dropouts. Second, such facilities would fill an important gap by helping the small businesses that create most new jobs, but are commonly unable to afford education and training programs, to achieve easy access to educational services suitable to each individual employee. Finally, the computer network used to provide these services could serve as an information hub to enhance the recruitment of targeted learner groups. For example, neighborhood outreach workers equipped with modem-linked laptop computers or TV-linked interactive terminals might canvas neighborhoods to provide assessment and guidance services.

Components of the ***Community Adult Education Information Services*** already exist. However, the full range of services envisioned in this proposal have not yet been combined. In Florida, for example, legislation has created experimental "literacy centers" at four community colleges and adult schools. They provide intensive outreach and recruitment, multi-media publicity campaigns, and free instructional materials to both tutors and students. All these centers are prohibited from providing direct instruction. Along a similar line, a number of community Educational Brokering Centers were established in New York, Florida and other states during the 1970's to provide information and guidance about a broad range of adult and continuing education opportunities.

The above text and discussion of Recommendation 3 will be used as a guideline in developing options for implementing the Community Adult Education Information Service.

Part of a "Collaborative Infrastructure"

The community adult education information services recommendation addresses the need for cross agency information about available programs and services within a community. The concept combines the need for an electronic cross-agency "clearinghouse" with one or more locations and comprehensive guidance and counseling services where learners can receive assessments of their needs and programs best suited to meet their needs. These services are to be provided in a supportive and easy-to-use setting.

The proposed *information-assessment-referral* service emphasis hinges on providing the adult learner with up to date information on (1) available services, (2) an assessment of

learner's needs,[4] (3) the learner's entitlements and options, and (4) assistance in making informed choices about available education and training.

Recommendation 3 also stresses that special efforts be made to recruit the hard to serve and illiterate (disenfranchised) adult learner into the service system. These efforts and associated counseling must optimize tradeoffs between skill deficiencies and the prospective length of education. Learning styles and alternative modes of education and training must be considered.

The involvement of employers in this system would offer methods to create public-private training programs or referrals to existing ones.

The involvement of employers in this system would offer methods to create public-private training programs or referrals to existing ones. Other innovative possibilities are suggested. The community adult information services is part of the core of the education and basic skills training system. This services system will combine inter-agency resources to serve the diverse needs and interests of adult learners.

As noted above, the Information Service would be closely linked with two other strategic recommendations:

- Recommendation 8 - Integrated Adult Education Data System
- Recommendation 4 - Adult Education Access Card (*EduCard*$_{TM}$)

The information services combined with these two proposals would constitute the core of a "collaborative infrastructure." This infrastructure is intended to better integrate diverse education and training program through the efficient flow of information.

The electronic listing of provider and needs information would be expected to include up to date information on program and course openings, schedules, requirements and costs. Tomorrow's adult education process begins with a potential learner or group of learners (*e.g.* a business or public agency may also refer persons to pursue literacy, job skill or other types of learning).

- Individual learners go to a ***Community Adult Education Information Service Center.***
- Upon arrival at the center, learners present their ***Adult Education Access Card (EduCard***$_{TM}$***)***. New learners go through an intake process and are issued their *EduCard*$_{TM}$.

[4] Ideally a local assessment approach will make provision for specialized testing like vision and dyslexia as well as work sampling approaches.

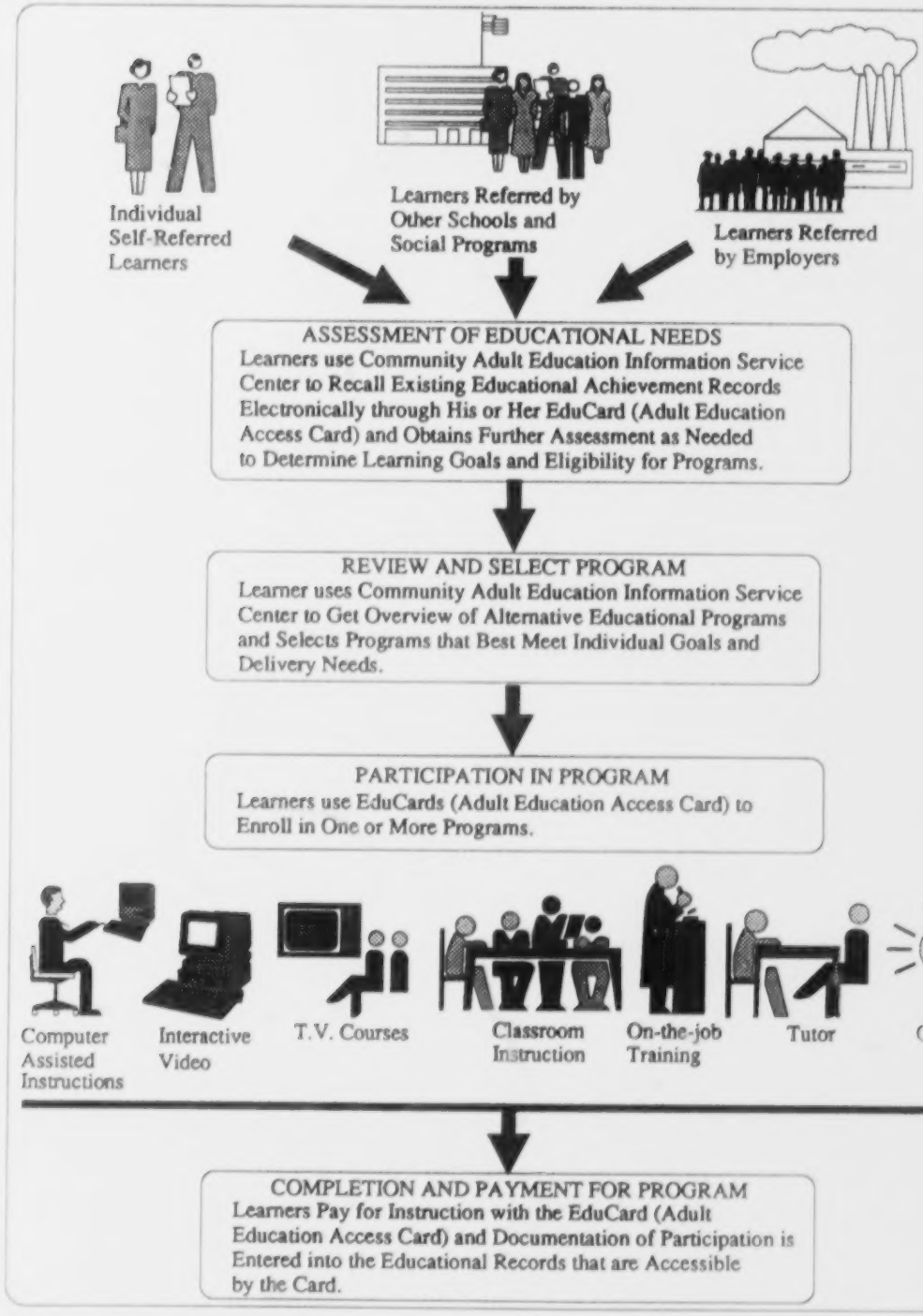
- This card is used to access individual educational records and program eligibility status from an ***Integrated Data System***.
- Existing educational records would provide information on the learner's skill attainment and educational needs in terms of standard ***Performance Measures*** used by all participating instructional providers as well as other assessment tools.
- If initial or further assessment is needed, the learner can request further tests and counseling with resources available through the *EduCard*$_{TM}$. New assessment records and assessment costs are interactively entered into an ***Integrated Data System*** **(See Exhibit 1)**.

Once assessments determine the needs of the learner, a combination of guidance and interactive information technology is used to provide an impartial overview of programs that meet the learner's needs. This will include information such as the educational objectives of the programs, cost to the individual participant (if any), duration and scheduling, location, special features, assessments of performance, satisfaction of prior participants, and certification status in accord with state and regional program ***Quality Standards***. Once educational options are presented and discussed, the individual selects the program that best meets his or her learning goals. A quick check is made to insure that the program has an opening and the learner is referred to the program **(See Exhibit 1)**.

The learner "checks in" with the program of choice (*e.g.* appears at locations, downloads through a modem linked to a home computer, rents a portable interactive instructional module, or meets a tutor). Upon checking in, the learner submits his or her *EduCard*$_{TM}$ which is used like a credit card to begin a billing process for services in accord with a system of funding policies and procedures designed to encourage program improvement, responsiveness, innovation and alternatives.

Exhibit 1

HOW ADULT LEARNERS RECEIVE SERVICES


Individual Self-Referred Learners
Learners Referred by Other Schools and Social Programs
Learners Referred by Employers
ASSESSMENT OF EDUCATIONAL NEEDS
Learners use Community Adult Education Information Service Center to Recall Existing Educational Achievement Records Electronically through His or Her EduCard (Adult Education Access Card) and Obtains Further Assessment as Needed to Determine Learning Goals and Eligibility for Programs.
REVIEW AND SELECT PROGRAM
Learner uses Community Adult Education Information Service Center to Get Overview of Alternative Educational Programs and Selects Programs that Best Meet Individual Goals and Delivery Needs.
PARTICIPATION IN PROGRAM
Learners use EduCards (Adult Education Access Card) to Enroll in One or More Programs.
Computer Assisted Instructions
Interactive Video
T.V. Courses
Classroom Instruction
On-the-job Training
Tutor
Others
COMPLETION AND PAYMENT FOR PROGRAM
Learners Pay for Instruction with the EduCard (Adult Education Access Card) and Documentation of Participation is Entered into the Educational Records that are Accessible by the Card.

Objectives of the Information Services

The key objective of the community information services component is to facilitate access of individuals to the best possible education and training via easily accessible and comprehensive information. To accomplish this key objective, this service must meet other objectives. It must reliably and accurately maintain information on the service needs, the program environment, available services, learner needs and characteristics and program outcomes. It is expected that the information services will define program performance and will, eventually, be able to display the expected costs and learning expectations for different types of learners. Likewise as learning moves away from seat time measures of payment and achievement, the system will be able to report performance. (See Exhibit 2).

Exhibit 2
OBJECTIVES OF THE COMMUNITY INFORMATION SERVICES

SIMPLIFY AND STREAMLINE LEARNER PARTICIPATION

- Proactive Outreach
- One Stop Shopping for Assessment
- Public Information on Services
- Consolidate and Standardize Provider Information
- Counseling Assistance
- Standardize Assessment

MAINTAIN DATA ON SERVICE NEEDS

- Learner Needs
- Employer Needs
- Labor Market Needs

MAINTAIN DATA ON AVAILABLE SERVICES

- Education Services
- Training Services
- Assessment and Testing Services
- Entitlement and Scheduling Services

MAINTAIN IMPACT DATA ON SERVICES DELIVERED

- History of Learner Services
- Status of Present Services
- Measures of Successful Services

MAINTAIN DATA ON SERVICE COSTS

- Based on Service Types
- Based on Learner Characteristics
- Based on Provider Characteristics

In many ways, these objectives are the same as the objectives for the ***integrated adult education data system***. The chief difference is that information included in this component will be, for the most part, summary information. In this sense the community information services network will serve as the repository for community level information regarding adult and basic skills education needs, options, and outcomes.

Chapter 2

Review of Literature and Information

The community adult education information services concept evolves from the community based information and referral services and the more recent educational brokering movement.

Social service information and referral (I&R) services began in England during World War II to assist persons needing social and medical services as a result of the bombing attacks.[5] During the 1960's the greatly expanded U.S. federal role in promoting social, educational, and employment and training services led to the need and interest in I&R strategies.[6]

General Literature and Background

Information and referral services tend to develop for specific functions or audiences. For example, the Older American's Act required the Administration on Aging to use funding to support I&R services for senior citizens. Likewise federally sponsored employment and training programs have long required supportive services linkages including outreach and referral to augment their own activities.[7]

During the 1970's education began experiencing dramatic changes. To offset the decreasing number of 18-21 year olds, colleges and universities began to reach out to adult students with new options tailored to the mature individual. The result was a bewildering maze of part-time degrees, credit by examination, credit for life experiences, external degrees, home

[5] Kahn, Alfred, *Neighborhood Information Centers: A Study and Some Proposals*, Columbia University School of Social Work, New York, 1966.

[6] Much of the background research is drawn from a recent paper commissioned by the Adult Education Institute for Research and Planning. The author, Dr. Betty Turock, is co-author of this paper. See Turock, Betty J., "The Educational Brokering Movement," Adult Education Institute for Research and Planning, Sacramento, California, December 1989.

[7] Mobilizing multi-agency resources seeks to stretch limited funds, link services that would otherwise be unavailable, and reach targeted groups difficult to serve. The success of these ventures is largely dependent on the mid-level collaborations, formal and *ad hoc*, that occur among service delivery agencies.

study, correspondence courses, and credit banking for educational mobility. All of this was superimposed on the more traditional programs at community colleges, vocational schools, and the vast array of learning opportunities in extant adult education, employment and training, libraries and community based organizations.[8]

The need for these I&R services in adult education has grown as the result of important sociological and demographic shifts in the United States. Several of these shifts are projected to continue well into the 1990's. They constitute somewhat discrete markets for learning services.

The need for these I&R services in adult education has grown as the result of important sociological and demographic shifts in the United States. Several of these shifts are projected to continue well into the 1990's. They constitute somewhat discrete markets for learning services. They include:[9]

- **Need for Better Educated Work Force.** More than half of the working adults are employed in service occupations. This requires a better educated labor force. Most Americans seek education for career concerns. Thus, the most successful educational brokering services have occurred when educational opportunities have impacted the economic vitality of the local community.

- **Need to Reach Alienated Learners.** Roughly half of the U.S. adults still have less than a high school diploma. This necessitates an extensive market for services to help the discouraged and less educated learner find education experiences best suited to his or her life goals. Education has frequently failed this group. They often see themselves at fault and as a result are in a double bind. On the one hand they need education while having had rejecting associations with its sources. When the need for more education becomes so important that they must break out of the bind, they look for nontraditional educational routes and sources. This need is expected to expand in the future.

- **Growth of Women Workers.** The large number of women entering or reentering the labor force is a third market. Often they are convinced that their experience and training are obsolete with the consequent lack of confidence in their ability to compete for employment.[10] This group overlaps the other three market segments.

- **General Need for Educational Access.** Research indicates that "almost everyone" undertakes one or two learning efforts a year. The median is eight projects a

[8] Turock, *Op. Cit.*, page 1.

[9] *Ibid*, page 2.

[10] Betty J. Turock, "Women's Information and Referral Service Asks Community for Answers," *Wilson Library Bulletin*, April 1975, pages 568-572.

year involving eight distinct areas of knowledge and skill. This self motivated independent learner may spend on the average of 700 hours a year in learning.[11]

These adult learning markets have led to the need for what is called the "education brokering" service. Educational brokering is defined as an information service designated to match adults who have educational needs with the means to meet these needs. Most frequently this results in a hybrid process of combining guidance counseling with information and referral. The education broker is a person or service that mediates between the learner and the agencies or institutions who offer learning services (the provider). The learner's decision criteria commonly includes provider characteristics such as (1) enrollment policies, (2) entitlements, (3) program offerings and timetables, (4) costs and (5) exit requirements. The education broker helps make sense of the tangle of information, while at the same time helping the learner make self-assessments aimed at clarifying future learning goals.[12]

The education broker's role is twofold: (1) build the database of available services, and (2) assist in the client self assessment.

The education broker's role is twofold: (1) build the database of available services, and (2) assist in the client self assessment. The former is derived from provider questionnaires, phone interviews and face to face contacts. Personal contact is the preferred method of information collection. The personal contacts and feeling for the providers is far superior to electronic data.

Learner guidance is more an art than a science. Trust is the key. However, it is not unusual to find there is often a distasteful residue of prior experience with high school and career counselors which is hard to overcome.[13] Unfortunately, career and vocational assessment is often overlooked or treated so casually as to be meaningless. Within the processes proposed for the *EduCard*$_{TM}$ and Community Information Services there must be substantial attention paid to assessment and to getting provider agencies to reexamine their attitudes and policies regarding learner assessment.[14]

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[11] Allen Tough, ***The Adult's Learning Projects***, [nd].

[12] The evolving model of the California infrastructure functions is stressing common approaches to learner assessment as well as assuring the special testing services are available for learner wishing or needing extended assessment. See the ***Policy Option Paper on the EduCard***$_{TM}$ and the ***Policy Option Paper on Quality Standards and Performance Measures***.

[13] A recent study for the National Occupational Information Coordinating Committee (NOICC) found that just 41% of the workers hold jobs that they had planned. Among those without high school degrees only 21% had planned their jobs and 25% of that group had taken the only jobs they could find. Julliette Lester, Executive Director of the NOICC, noted that there is a strong need for government and job counselors to improve the way they educate the public about career opportunities. "Working at the Wrong Job," ***San Francisco Chronicle***, January 12, 1990, pages C-1 and C-4.

[14] Conversation between Dennis Porter and Van Woolley, Career/Vocational Assessment Consultant. See also Van Woolley and Janice Laine, ***Career/Vocational Assessment Model for Learning Handicapped Students: A Handbook***, for the Diagnostic School for Neurologically Handicapped Children, California Department of Education, (Draft), July 1, 1988; and *A Vocational Assessment Model*, Work Group on Vocational Assessment, Specialized Programs Branch, California Department of Education, April 1986.

Recent *Vocational Education Act* research suggests an eight step assessment process.[15] This includes (1) screening and providing an orientation for clients, (2) conducting a formal interview, (3) conducting a medical screening, (4) determining educational achievement, (5) discovering vocational interests and goals, (6) conducting interest inventories, (7) developing individual learning and employment plans, and (8) offering referral information (See Exhibit 3).

Exhibit 3
EIGHT STEP ASSESSMENT PROCESS FOR VOCATIONAL EDUCATION

1. **Screening and Providing an Orientation for Clients**
2. **Conducting a Formal Interview**
3. **Conducting Medical Screening**
4. **Determining Educational Achievement**
5. **Discovering Vocational Interests and Goals**
6. **Conducting Interest Inventories**
7. **Developing an Individualized Education and Employment Plan**
8. **Offering Referral Information**

The approach recommended in the *EduCard*$_{TM}$ policy options paper favors a three stage process which is client sensitive.[16] The stages are: (1) preliminary screening, (2) initial agency screening and (3) vocational exploration and work sampling (See Exhibit 4).

Exhibit 4
PROPOSED *EDUCARD*$_{TM}$ THREE-STAGE PROCESS

Stage 1:	**Preliminary Screening**
Stage 2:	**Initial Agency Screening**
	. **Part A - Prevocational Assessment**
	. **Part B - Basic Vocational Aptitude**
State 3:	**Vocational Exploration and Work Sampling**

The term "career" addresses assessments focused on the learner's career development process. The first stage is preliminary screening primarily using career and vocational interest inventories and paper-pencil aptitude tests. Stage I

[15] Felan, Blanche Z., *Establishing and Administering a Community College Vocational Assessment Center*, 2nd edition, U.S. Department of Education, Office of Educational Research and Improvement, ED 300060, 1988.

[16] Woolley, *Ibid.*

screening can be integrated into career guidance classes or workshops. The information helps learners in career decision making with counselors or advisors helping examine the realism of these decisions. An ideal plan includes local labor market implications, education and training options and a proposed sequence of learning needed to reach designated goals.

Stage II addresses formal and informal assessment techniques used to screen learners into job training or placement programs like vocational education, ROP, JTPA, and GAIN. The targeted learners are persons identified in Stage I as not being ready for enrollment or placement. These assessments include interviews, structured observations, interest inventories and problem solving vocational aptitude tests.

Stage III is work sampling and vocational exploration for persons who are still shown to be not ready for enrollment or placement in learning or employment. These assessments are more rigorous job task and work performance in nature.

To date, there have been few channels for the types of cooperation required for educational brokering. Each community has subsets of service systems that have developed and maintained educational information databases separately. For the most part, educational brokering services have developed in three institutional environments:

- **Educational Counseling Services.** An educational guidance service environment in which information about test scores and aptitudes may be learned and related to appropriate parts of an educational database.

- **Libraries.** A library, neighborhood or community information center, most often staffed with information and library personnel.

- **Social Agency Referral Services.** A social agency/community I&R service, usually administered and staffed by social work or employment and training personnel, and often run in conjunction with local governments.

The lack of integration of brokering activities among these environments has at once lead to incomplete information and duplication of efforts. Limited resources and agency-specific goals frequently exclude important brokering information and linkages. At the same time, the lack of communication between agencies concerned with brokering commonly causes inefficient and counter productive duplication of effort.

Five areas of possible cooperation in providing educational brokering services have been identified. These include: (1) directory publication, (2) expert advice, (3) direct provision of information only, (4) direct provision of guidance, information, and information and referral, and (5) computer update and records maintenance. These five areas of cooperation are not different kinds of activities, but progressive levels of the same basic service provision. These service activities can be divided into active and passive categories or direct and supportive services.

One study of twelve community directories of adult learning activities concluded that the most useful directories addressed a limited geographic area and that agency and volunteer cooperation made it possible to distribute the directories very inexpensively. It was also found that government grants were an important funding source. The usual developers were libraries, colleges and universities, and adult education associations. Development time took about six to nine months.[17]

These factors and implications are explored further in the next section on models and proposals.

Models and Proposals

This section builds our initial development steps by examining extant models and proposals. Our developmental process may lead us to recommend aspects of several models and proposals as initial policy choices to guide further development.

WORKING MODELS

Research shows four library-based models of educational brokering. The public library is traditionally a place of independent, self-planned, self-directed education, backed by group learning programs, and in some cases one-to-one tutorial arrangements. Here, learners can study at their own pace and act as joint planners of their learning programs with librarians. In this process they must assess their own needs and interests, and set their own goals. The librarians act as the learner's advisors, and the libraries provide the learning materials. These library based brokering and guidance services are most successful when they are developed in collaboration with other educational agencies. However, cooperation in educational

[17] Sharon A. Slattchaugh, *A Study of Comprehensive Adult Education Directories*, Master's Thesis, the Graduate School, University of Minnesota, ED 159368, 1979.

brokering does not always proceed from identification of participants to implementing an action plan. The cooperation is too often informal with no plan for provider participation developed along functional lines, relying on institutional strengths.

Forsyth County Public Library

This service has been operating for over fifteen years. It was developed in cooperation with other regional educational agencies after substantial planning. Dr. Turock served as a staff member when the service was started and funded. Today it serves over 20,000 people annually from eleven libraries in the urban and rural areas of Winston-Salem and environs. The service emphasizes career choice and selection, job information skills and financial aid for education. Grant writing courses were added when no educational supplier was evident. According to Dr. Turock, this service system is considered a model for the southeastern U.S. It has received foundation and federal education funding. A major measure of success is the ability of this adult education information service to continue to operate through area and regional funding.

Montclair Public Library

This initiative began as a joint venture with the then newly established Thomas Edison College (now Edison State College), New Jersey's university without walls. The college was looking for a recruitment and counseling site in the northeastern part of the state. The library, a main facility and a branch in an affluent suburb, supplied the space and the college brought the counselor and furniture. The library staff supplied I&R services about educational programs. The services were so successful that one year after its inception, that the college was funded for a permanent site in nearby East Orange.

The public relations aspects of this approach should be noted. A videotape describing the services was shown on an ongoing basis in the library's foyer. News media from nearby New York city gave it favorable attention, and brochures and flyers were distributed to libraries around the state. The library supplied the PR specialist, who was paid by Thomas Edison College.

Monroe County, Library System

The Monroe County model began with the 1972 Library Services and Construction Act funding from the U.S. Department of Education. New York's Monroe County Library System has an urban information center community

information service which includes educational information. This county system, consists of 75 libraries covering 4,000 miles of urban and suburban communities. Its top priority was to develop and publish a ***Human Services Directory*** as a tool for agencies, institutions and individuals who wished to subscribe. The on-line computer directory, available through terminals in the library connected to the county's computing facility began operation in 1974. It is updated annually and sold to regional agencies.

The directory is organized by agency. Information includes address, phone number, administrator's name, service hours, area served, eligibility requirements, fees, procedures, and whether waiting lists wait for services. Directory indexes are prepared cross referencing agency information by type of service, subject of service, popular name and zip code. During 1978-80 the number of requests averaged about 200,000 per annum. Now the database is produced on two microcomputers, making provider and institutional access much easier.

Dr. Turock has noted that the major strength of this model was the detailed planning that went into its development. This planning looked at prior experiences, the objectives, on-going support and public information. In conducting their initial needs assessment, two market panels were formed: one made up of potential learner's advocacy groups and one made up of representatives from educational agencies. These panels were organized to reflect unique groups with different educational needs. Their task was to define brokering services programs for these unique groups.[18]

New York Job Information Centers

New York has been a long time leader in brokering educational information. A successful network of Job Information Centers (JIC), free of charge, is still working in its regional library systems. The JIC concept began in the Yonkers Public Library in 1972 with a $15,000 grant from the U.S. Department of Labor.

Today's New York JIC services vary according to the local environment. However, several services are central to them:

- The New York State Employment Service supplies the libraries with computerized daily job listings on microfilm, which are made directly available to the job seeker.

[18] Turock, *Op. Cit.*, pages 14-15.

- The libraries post job listings from private agencies and employers, and compile information about agencies serving job seekers.
- Classified ads from local newspapers are displayed in English, and often in Spanish and other foreign languages.
- Special publications like "Your Job and Your Future," produced by the Yonkers Public Library, are available to provide listings of training and employment agencies.
- There is an active ongoing JIC promotional program.
- Forums are held with all aspects of employers, counselors, and training experts serving as resources.

The library does not serve as a placement agency, but as a clearinghouse for job opportunities and job seeking. Most job information centers have specialized publications listing jobs for women, minorities, and the handicapped. Specialization among the JICs has led to a Bethlehem Public Library staff member giving regular talks to older adult groups about job and employment information. Other libraries like Mount Vernon have created Career Information Services. In Rochester the JIC concentrated on second career information helping women seeking to reenter the job market.[19]

In the mid 1980's New York developed a three phase program to expand educational brokering and support services for adult learners.

- **Phase I.** Develop a literacy information and referral system to link potential learners and volunteers with service providers.
- **Phase II.** Develop and install a computerized database for adult education. The database contains information on some 270 service providers. Interested persons can call a toll-free hotline and are provided with needed information at the time of their calls. In addition, a computer generated report is given to providers regarding caller interest and is available for callers with more details and program referral information.

[19] *Ibid*, pages 16-17.

During the first year 2,766 callers were referred to 211 adult education providers.[20]

- **Phase III.** This phase concentrated on regional staff development activities. Administrative and consulting services were provided along with some 30 workshops, conferences, training sessions and other events. About 400 instructors and administrators participated.

The Peninsula Library System Community Information Program

The Community Information Program (**CIP**) is a project of the Peninsula Library System, a consortium of all the public libraries in San Mateo county. It also publishes the *Directory of Human Services for San Mateo County*, provides a monthly orientation to community resources, and provides I&R services to librarians and other human service professionals. Mailing labels for the database can be generated at any time for mass or targeted mailings.

Criteria for directory listings are:

- Governmental and private nonprofit organizations providing: health care, social services, recreation, legal aid, education or vocational training
- Services provided to San Mateo county residents
- Agency location within San Mateo county

Information searches can be done from the computerized database for agencies working in a particular area or providing specific services. The searches and mail labels are free to nonprofits while for-profits are charged both for the cost of a search and for mailing the results.

The CIP also participates in and manages the Bay Area Information and Retrieval System (**BAIRS**), a multi-county venture of libraries and other human service agencies in Alameda, Contra Costa, Marin, San Francisco and San Mateo counties. BAIRS is an on-line computerized database of human service providers, resources, and community information. BAIRS grew out of the CIP experience.

Both CIP and BAIRS services information is contained in one large file on a Stanford University mainframe computer,

[20] Gene M. Winter, "Support Systems for Adult Education: Final Evaluation Report," Bureau of Adult and Continuing Education Program Development, State University of New York, Albany, for the U.S. Department of Education, Office of Educational Research and Improvement, ED 290890, 1987.

using the Stanford Public Information Retrieval System (SPIRES). This file contains 6,400 records of bay area service providers and resources of which San Mateo County has over 800 records. Operating costs for this bay area service were about $36,000 last year. The costs were for computer, programming and disk storage and university overhead.

This I&R program began in 1974 with a *Federal Library Construction Act Grant.* The information retrieval portion began with the San Mateo County libraries linked to the then Stanford University computer via Teletype machines. They have long since graduated to the use of personal computers.

GAIN Employment Activity and Reporting System (GEARS)

GEARS is a management information system (MIS) developed for the Los Angeles County GAIN program. We include it in this discussion because it includes assessment, referral, eligibility, and multi-provider services in one information system. The MIS also includes financial control and management and statistical reports on program activities.[21] Access to information is restricted according to multiple levels of security.[22]

GEARS links directly to the county welfare payments system, can assign learners to GAIN case managers, and track the learner through the service system. The computer based assessment process includes an examination of educational, child care and support services needs in addition to the learner's skills, work experience and employability. Education and training needs are matched with the learner's home and potential providers.

Regarding the assignment of social services, child care eligibility is determined, payments made and costs monitored. Transportation costs to and from training are calculated and payments arranged. Other service needs like books and work clothing are determined on a case by case basis.

Contracts for education and training services serve as the basis for case (learner) monitoring. They can be printed on-line by the MIS.

GEARS is an example of a multi-purpose information system that takes on many of the qualities of a community information services system. It demonstrates that there can be little difference between a detailed MIS and aspects of the California collaborative infrastructure model.

[21] JTPA MIS in states like California and Washington also address multi-program services and learner status and outcomes.

[22] "GAIN Employment Activity and Reporting System (GEARS)," Systemhouse, Cerritos, CA., February, 1990.

Other Models

Other library based efforts include a toll-free centralized brokering service in Texas providing information on adult education services and class schedules. Problems encountered included incorrect class schedules, difficulty in getting updated service and class information, documentation of referrals, and lack of information dissemination to instructors.

The Public Library Association (**PLA**) with assistance from the W.K. Kellog Foundation set up education information centers (**EIC**) in four test states (Nebraska, Washington, Pennsylvania, and Michigan) to develop information and database services.

STRENGTHS AND WEAKNESSES OF WORKING MODELS

This research suggests a set of strengths and weaknesses which should be considered in the design of the community information services system. (**See Exhibit 5**).

The successful information services programs have been patient in their design and implementation.

The successful information services programs have been patient in their design and implementation. They have developed wide community linkages and involved the collaborating programs in the planning and in operations. The importance of involving agencies with a history of innovation and clearly defining the cooperating agencies roles is stressed.

Identified problem areas in implementing community information services include the (**1**) lack of financial planning and available resources, (**2**) the uneven transition from demonstration to institutional programs, and (**3**) the lack of evaluative research on the these programs.

Unfortunately, there is a lack of policy research on educational brokering and federal legislation has been enacted in a scattershot way. Consequently, there is not a national policy encouraging educational brokering funding. This is also true at the state level. Some have suggested that a national association which would serve as an advocate for legislation, policy analysis and funding would help solidify attention and mobilize the necessary resources to give the concept a chance to succeed.[23]

[23] Turock, *Op. Cit.*, pages 21-22.

Exhibit 5
COMMUNITY INFORMATION SERVICES

DESIGN CONCERNS

STRENGTHS:

- **Long-term planning is essential.**
- **Stakeholders must be involved as partners in the planning.**
- **Develop and publish guidelines for service and disseminate them widely.**
- **Seek out agencies with a history of innovation and receptivity to change.**
- **Try to ensure a long-term commitment to the concept.**
- **Negotiate the role and level of participation that each stakeholder will play.**

WEAKNESSES:

- **Lack of financial planning can sink well-designed services.**
- **Plan for continued funding after the initial demonstration.**
- **Information updating on a timely basis is a major problem.**
- **"Turf" problems combined with a lack of appreciation for the unique contributions of non-traditional as well as traditional educational program sources must be understood and worked out in negotiations.**
- **Educators may overestimate the importance of communication and counseling services in brokering and underestimate the importance of the information being transferred.**
- **The biggest problem is the absence of evaluation research on educational brokering services. When the research exists it is not systematic and relies on formative information.**

CALIFORNIA'S "COLLABORATIVE INFRASTRUCTURE" MODEL

To frame our further analysis, we begin with the descriptive model of the proposed adult education and basic skills infrastructure. **Exhibit 6** describes this set of interrelationships which we call the California "collaborative infrastructure".

Exhibit 6
OVERVIEW OF COLLABORATIVE INFRASTRUCTURE FUNCTIONS

Assessment and Placement of Learners:
Maintenance and Use of EduCard and Integrated Data System:
Planning and Describing Programs:
Learner Checks into Information Service:
• Self Referral
• Referral by Employer
• Referral by Educ or Training
• Referral from Social Program
Distribute EduCards™ to Selected Learner Groups
Interview Learner and Collect In-take Information:
• Date on Visit (Date, Site)
• Demographics and Program Eligibility Information
• Goals and Reason for Visit
• Educational Background/Recent Educational Activities
Establish or Update EduCard and Integrated Data Base:
• Retrieve Educational Records from Programs and EduCard
• Enter or Update with Information from In-take Interview
Conduct, Update or Review Assessment of Skills and Aptitudes:
• Review Past Educational Records and Test Scores
• Conduct New Assessment (Basic Ed, VocEd, Other)
Establish or Update EduCard and Integrated Data Base:
• Educational Attainment of Learner
• Assessment Results (Test Scores, Counseling)
Standardized Description of Programs
Review and Select Program:
• Specify Educational Goals
• Specify Learner Constraints and Preferences (Time, Location, Method, Cost, Support Services)
• Determine Eligibility for Programs and Services
• Determine Program Openings
• Review and Discuss Options
• Select the most Appropriate Program for Learner
Provide Information about Programs and Options:
• Program Code, Title and Description
• Program Level & Prerequisites
• Program Conditions (Time, Location, Method, Cost, Support Services)
• Program Performance Records
• Current Enrollment and Openings
Ongoing Updates of Information on Programs:
• Program Code, Title and Description
• Program Level & Prerequisites
• Program Conditions (Time, Place, Method, Cost, Support Services)
• Current Enrollment and Openings
Referral and Pre-Registration:
• Referral to Program (Education and Training, Assessment, Counseling, Social Services, Employment)
• Electronic Pre-registration
Update EduCard and Integrated Data Base:
• Outcome of Assessment and Counseling
• Referral (Program, Date)
Use of Assessment and Referral Outcome Data to Evaluate and Plan Programs
Program Participation and Achievement:
• Program Participation (Enrollment, Attendance, Completion)
• Achievement (Grades, Test Scores)
• Learner Satisfaction
Update EduCard and Integrated Data Base:
• Program Participation (Enrollment, Attendance, Completion)
• Achievement (Grades, Test Scores)
• Learner Satisfaction
• Special Studies
Use of Program Participation and Achievement Data to Meet State and Federal Compliance Needs, and to Evaluate and Plan Programs.
Post-Program Activities:
• Counseling and Assessment
• Education and Training
• Employment and Income
Update EduCard and Integrated Data Base:
• Post-Program Outcomes (*Education & Training, Assessment & Counseling, Employment, Income)
• Special Studies
Use of Post-Program Follow-up Data to meet State and Federal Compliance Requirements, and to Evaluate and Plan Programs

In this descriptive model there are several sets of activities which can be considered the probable domain of the community adult education information services or an information services system. How they are enacted is the subject for policy analysis. These functions are:

(1) **Planning and Describing Programs**

(a) Develop and standardize program descriptions
(b) Ongoing updates of information on programs
(c) Use of assessment and referral outcome data to evaluate and plan programs
(d) Use of program participation and achievement data to evaluate and plan programs
(e) Use of post-program Follow-up data to evaluate and plan programs

(2) **Maintenance and Use of *EduCard*$_{TM}$ and Integrated Data System**

(a) Establish or update *EduCard*$_{TM}$ and integrated database
(b) Provide information about programs and options

(3) **Assessment and Placement of Learners**

(a) Learner checks into information service
(b) Interview learner and collect intake information
(c) Conduct, update or review assessment of skills and aptitude
(d) Review and select program
(e) Referral and pre-registration

Based on these sets of probable functions, we can suggest at least some of the types of data elements that we would like to see in the community adult education information services database. They follow.

Community Information Services Database

It is expected that the community information services database will include a standardized inventory of area and provider based data (**See Exhibit 7**).

Exhibit 7
ELEMENTS IN THE INFORMATION SERVICES DATABASE

1. **Program Code, Title and Unique Identifier Code**
2. **Description of the Programs**
3. **Program Level and Requirements**
4. **Defined Area Service Needs**[24]
5. **Detailed and Current Enrollment and Openings:**[25]
   a. **Service boundaries**
   b. **Intervention philosophy and strategies; targeted learners (ABE, ESL, GED, employability preparation)**
   c. **Services, prerequisites, modes of instruction, and available openings**
   d. **Special assessment and testing facilities**
   e. **Program performance records cross referenced by learner demographics**
   f. **Referral procedures**

This inventory, when aggregated at the state level, will represent the public and private for-profit and nonprofit providers delivering adult basic education, basic and vocational skills training, and employment services, listings of these services, and data on service interventions.

At the local level this database will provide current information on (1) needs analysis, (2) services available and provided, and (3) assessments of the services provided. It is this third responsibility which will prove the most troublesome and controversial as it superimposes a common evaluative structure on the delivery of education and basic skills training related services. However, without this information, it is almost impossible to determine whether the services are impacting the needs and whether the service providers are indeed delivering services effectively. The addition of this evaluative function closes the planning and analysis loop to permit self-appraisal and cross-agency appraisal regarding needs versus services versus outcomes.[26]

[24] To date there has been little detailed discussion in the strategic plan of how adult education needs data will be developed and maintained at the state and local levels. Current funding makes it difficult to target resources to communities in need of outside special targeted programs like GAIN, JTPA and IRCA. However, it is reasonable to assume that there is a disparity between learner needs (service demands) and the level of services available. Consequently, data on learner needs should be developed and maintained within the community adult education information services database, as well as statewide.

[25] New optical scanning techniques make it possible to include scanning descriptive materials into a data file to be reproduced for the client at the point of referral. While currently expensive, this approach will soon become quite cost effective.

[26] Dennis Porter and Bill Sywak, *The Strategic Management of Nonprofit Organizations*, in manuscript 1985 and 1987; and Porter, Dennis, "Using the MIS for Monitoring and Evaluation," Micro Methods for the Department of Labor 402 National Conference, April 1989.

Employer related information should be an information services component. Job listings, special orientation programs, listings of education and skill requirements, public-private training ventures should be included.

Design and Distribution

The technology for the automated aspect of the information services will be microcomputer-based. The actual database can be distributed by the agent responsible for its maintenance and updating to any and all interested parties.

The technology for the automated aspect of the information services will be microcomputer-based. The actual database can be distributed by the agent responsible for its maintenance and updating to any and all interested parties. The costs for this distribution are on the order of $5.00 per disk plus production and system maintenance time.[27] Given these costs, there is good reason that there should be high standards for information quality and quantity, and maximum distribution. Service fees can be part of the provider's income. No special software should be necessary to use the computerized data, though hardware and software standards must be set.

It is expected that these local data will be reported to a central repository or clearinghouse in Sacramento. Several options are suggested in the *Integrated Adult Education Data System* policy option paper.

New Developments and Considerations

The design of the community information services system will occur in a dynamic time. Other ***Adult Education for the 21st Century*** recommendations will help drive its development, as will new technologies and the increased involvement of the business community in workplace oriented basic skills development.

PERFORMANCE MEASURES AND INNOVATIVE FUNDING

The options under consideration begin to frame the community information services development steps. We have already seen the possibility of changes from the strategic plan to the initial design tasks. The single feature most likely to have future impact on the design of the community information services will be the outcomes of Strategic Recommendation 2, ***Funding for Innovation and Performance***. This recommenda-

[27] This approach is reportedly being used with the Santa Cruz libraries and other human services agencies community information services system.

tion, to the extent to which it can stimulate new thinking about cost effective service delivery and performance measurement, may change the nature and form of learning services and extend the alternatives available.

Recommendation 7, ***Quality Standards and Performance Measures***, seeks to produce a uniform, comparable approach to learner assessment and learner achievement. It is a difficult task. However, it will permit the community information services to provide the prospective learner with quantitative information on provider services and achievements with different types of learners.

NEW TECHNOLOGIES

The new technologies which will impact and make easier the design and implementation of the community information services and an integrated data system are aspects of computer and integrated circuit chip technology. Specifically they are:

Computers and computer hardware will undergo significant advances. Key impacts on the *EduCard*$_{TM}$ will be:

- Improved speed and graphics capability.
- Ability to access and use digital images.
- Improved capacities to store information inexpensively.
- The ability to use voice commands in machine communications.

The emerging integrated circuit chip technologies are described in the option paper on the *EduCard*$_{TM}$. Their evolution will lead to:

- Low cost improvements in integrated circuit card memory.
- Wider acceptance of magnetic and integrated circuit card type technology.[28]

The *EduCard*$_{TM}$ will be driven by software that can read, write and utilize the learner information in a relational database. Changes which appear eminent are:[29]

- The increased use of object oriented programming making software modification less expensive.

[28] *Smart card 2000*, D. Chaum and I. Schaumuller-Bichl, Eds., North Holland, 1989.

[29] David Coursey, "New Tech Not Just Acronyms; Offer Competitive Advantages," *MIS Week*, November 13, 1989, page 58.

- The increased use of graphic interfaces, reducing training time and simplifying data entry, editing and queries.
- Artificial intelligence advances, especially in "expert system" software will make it very easy to make machine based judgments regarding program eligibility and entitlements. This will enable paraprofessional personnel to serve as the intake persons and check eligibility. Routine eligibility checking, subject to verification, can be handled by the expert system software, and the non-routine cases can be certified by professional personnel.

This suggests that the computerized aspects of the community information services system can become easier to use to the point that they can be made available to any and all service agencies and employers on a regularly updated basis. It is important to think of any computerized information services as being able to be distributed easily across "nodes" in a service network. We no longer have to think of a center and a periphery when we think of information services.

BUSINESS INVOLVEMENT

The inclusion of the business community as partners and stakeholders can bring added dimensions to the nature of the community information services. They can include:

- Industry groups jointly sponsoring education, training and retraining with providers
- Specialized preemployment education and training programs
- Worksite literacy joint ventures
- New models for listing jobs
- New models for defining future employment and skill requirement needs

These examples demonstrate how easy the areas of information and content blur. It is important to enlist the business community in using the information services and to be certain that they are involved in defining them.

Key Findings of Literature Review

Our review of the literature and variations of extant models address the (1) history of community-based information services and the education brokering movement, (2) career/vocational assessment models, (3) several library-based models of community information services, and (4) their strengths and weaknesses. We discuss the California infrastructure model which combines the Community Adult Education Information Services, the *EduCard*, and the Integrated Adult Education Data System as the core or infrastructure for implementing the *Strategic Plan for Adult Education*.

Research to date does not provide a close model to emulate. Developmental work being done in Michigan and possibly New Jersey will offer some guidance, as will the Monroe County, New York and San Mateo county information services systems. However, our inclusion of outreach as an information and referral function and the requirement for a quite detailed and explicit set of provider data, makes the California model stand somewhat alone.

Based on our background research we suggest basic information services features or elements for the database. Several of these features are expanded in the discussion of issues and options.

Chapter 3

Options to Implement Recommendation

Four policy issues and twelve options are identified to begin to clarify our information services design and development.

The community information services model and database is very complex and will set the stage for significant advances in making education and basic skills training services available. However, it requires a commitment to cooperative excellence and the collection, reporting and use of service information beyond current uses. This presents both problems and opportunities for participating stakeholders.

Exhibit 8 illustrates how different learners and learner groups may use community information services to address learning and basic skills training needs. It assumes that adult learners are motivated to use these services for a variety of reasons.[30] It also describes how information and services can be combined.

Given the variety of learners and expected information service uses, stakeholders will be challenged to build community information services with clear quality controls, the possible uses of expert system software to suggest guidance options and to share cross agency information. To begin to shape this model, four developmental policy issues are framed and policy options offered for each. Neither the policy issues or options are exhaustive, but serve as a basis to begin to refine the design of the community information services system.

Policy Issues and Options

This subsection details the initial set of policy issues and options. The development issues and options to be discussed include:

[30] Hal Bender and Thomas Valentine, "Motivational Profiles of Adult Basic Education Students," *Adult Education Quarterly*, Vol. 40, No. 2, Winter 1990, pages 78-94.

- Level of Centralization
- Funding Responsibility
- Recruitment of Learners
- Level and Nature of Staffing and Technology

These issues are selected because they must be determined before additional feasibility analysis can move forward. Readers are encouraged to identify other issues and options for inclusion during the advisory process.

Exhibit 8
DESCRIPTIVE MATRIX OF USER SERVICES[31]

LEARNER GROUPS	SERVICES NEEDED	USEFUL INFORMATION SERVICES						
		Outreach	Satellite Center	Assess-ment	Referral*	Special Testing	Support Services	Guidance
Single Parent	Parent Ed/Other Services		•	Unknown	•		•	Unknown
Limited English	ESL/Support Services	•	•	•	•	•	Unknown	
Functional Illiterate	ABE/Testing	•	•	•	•	Unknown	•	Unknown
Handicapped	Easy Access/Referral		•	Unknown	•		Unknown	Unknown
Older Adults	Referral*/Senior Prog		•	Unknown	•			
Citizenship	Citizenship Classes/ESL	•	•	•	•		•	Unknown
GED/Diploma	Referral*/Secondary Ed			•				
Home Economics	Referral*		•	Unknown	•			
Health and Safety	Referral*		Unknown	•				
Vocational Education	Voc Ed Classes/Assessm't		•	•	•	Unknown		
Recent Dropout	Assessment/Referral	•	•	•	•		Unknown	Unknown

**NOTE:* Referral based on information-based client decisions.

[31] Current funding makes it difficult to target resources to communities in need outside of targeted programs like GAIN, JTPA and IRCA. However, it is reasonable to assume that there can be a disparity between learner needs (service demands) and the level of services available. Consequently, data on learner needs should be developed and maintained within the Community Adult Education Information Services database, as well as statewide.

LEVEL OF CENTRALIZATION

It is not wise to be too prescriptive in the initial stages of system design. However, there are several community information services design issues which should be resolved before moving forward.

In the preceding subsection we identified four functions which the community information services system is likely to play in the collaborative infrastructure. They are:

- Planning and Describing Programs
- Maintenance and Use of the *EduCard*$_{TM}$
- Assessment and Placement of Learners
- Outreach and intake

Dr. Turock's research has identified at least five areas of possible cooperation in providing educational brokering services: (1) directory publication; (2) expert advice; (3) direct provision of information only; (4) direct provision of guidance, information, and information and referral; (5) computer update and records maintenance

How do we distinguish between the information services system and the participants in the system? Much of the discussion to date suggests that there is a presumed location, or locations, that make up the locus for the community information services. However, this would seem to vary greatly among communities. For example, in a large urban setting it is probably not reasonable to assume that learners go to a central facility for provider information, assessment or *EduCard*$_{TM}$ issuance. However, in other communities this may be appropriate. In largely rural areas where services are spread out over hundreds of miles, we may be faced with a separate set of choices.

Regardless of the approach adopted, it is important to have an active outreach strategy as part of the program. Proactive efforts must be made to attract the disenfranchised and hard to reach potential learner.[32]

Given this range of environments, we suggest three options for the model of the Community Adult Education Information Services system.

(1) **Centralized System.** Centralize the information services database, *EduCard*$_{TM}$ issuance, and assessment and placement (referral) of learners with one sponsor.

[32] California Department of Education has committed itself to a goal of reducing illiteracy by 5 percent in each year for the next ten years. This is over and above the persons currently being served in ABE and ESL programs. "California Education Summit, Adult Literacy Focus Group Final Report," California Department of Education, Sacramento, California, December 13, 1989.

(2) **Partially Centralized System.** Centralize the information services database maintenance and updating with one sponsor and decentralize the assessment and placement of learners and *EduCard*$_{TM}$ issuance.

(3) **Decentralized System.** Set the overall goals and standards for the community information services but leave the implementation decision to the local stakeholders.

These options can have many hybrids. However, they define the basic discrete alternatives.

(1) Centralized System

With this option each stakeholder community will select one agency or organization to be the central source for outreach, I&R, the services database, assessment and placement, and the issuance of the *EduCard*$_{TM}$. The actual configuration can vary substantially but assumes that the personnel involved will, to a large extent, be employees or agents of the selected sponsor. Whether the services are actually centralized or are provided in satellite centers remains a matter of local choice.

The models reviewed in the preceding subsection do not address the assessment function. This seems to be the key function that can benefit from standardization.

The models reviewed in the preceding subsection do not address the assessment function. This seems to be the key function that can benefit from standardization; yet which can be troublesome if a learner enters the system via a learning agency. In this case, is the learner referred to the information system sponsor for intake, assessment and placement? The inconvenience of traveling to a central intake and assessment facility (or facilities) can be counterproductive. We can expect persons to lose interest even before participating.

To date, the descriptive model for the community information services is seen as being a unified information management, intake, assessment, counseling, *EduCard*$_{TM}$ issuance, and referral system which impartially recruits, assesses, advises and refers prospective learners. All the responsibilities rest in the hands of one sponsor.

The strength of this approach is the ability to be clearly responsible for the community information services functions. The data should be more accurate, the *EduCard*$_{TM}$ information handled more securely, and the standards for assessment and testing followed with more care. However, this assumes that there are sufficient resources to carry out the function and that the environment and the stakeholder relationships are amenable to this centralization. Where the funds come from is

a significant problem. Their long-term availability must be assured if this option is adopted.

If it becomes feasible to use a common screening/ assessment tool to give a basis for program referral, this option would seem viable. The strategic recommendation on ***Quality Standards and Performance Measures*** is expected to produce a common standard that can be used by all providers. This may make this option more ideal.

Another likely change is in computer based information system technology. New storage systems like the compact disk read-only memory (**CD-ROM**) and compact erasable disk will permit ample information to be stored and processed on a microcomputer, making the possibility of decentralizing (distributing) information processing among all the active players. These changes do not support the need for a centralized system, but do not auger against it.

(2) Partially Centralized System

In this option one agency would be responsible for the provision of I&R services and the maintenance of the cross-agency services database. Recall, however, that it is presumed that this would include some proactive outreach, not just a passive public information campaign. Likewise it presumes that the database will include more inclusive information than suggested in Dr. Turock's research. Most especially this is expected to include information on the extent and nature of area learners' unmet needs, evaluative information on provider service outcomes and current information on program vacancies.

There is no explicit history for this kind of approach except within broad scale programs like JTPA, CETA, the Concentrated Employment Program (**CEP**), Community Action Program (**CAP**) and other efforts like the Model Cities employment and training activities. In these programs the prime sponsor is (was) expected to serve and/or coordinate these I&R, outreach, MIS, assessment and program quality responsibilities.

The Michigan model comes the closest at this time. Central to the Michigan system are (1) the integration of human service delivery programs, (2) a statewide information services system, and (3) an integrated data system which features the use of a learner's individual smart credit card to maintain his or her service information.

This *human investment system* when fully implemented is expected to enable every Michigan adult to obtain, at no cost, assistance to improve his or her basic education and training

skills. The system database, including the ***Michigan Opportunity Card***, can hold key information on the provider and the cardholder. This "smart" type card and community information system will provide access to the following services:[33]

- **Assessment.** Assessment of cardholder skills and eligibility for existing education and training programs.
- **Inventory.** Inventory of basic skills education and training programs available in the cardholder's community.
- **Personal Action Plan.** Personal actions plans to upgrade the cardholder's skills and education.
- **Referral.** Referral to the appropriate training and education services.
- **Job Placement Assistance.**
- **A Basic Skills Account and Other Accounts.** A basic skills account and other accounts to help persons obtain general or specific skills necessary for the current workplace.

However, in the Michigan model there is no presumed local central source for the community information system. Rather is a distributed database that links to a statewide database.[34]

It makes good sense to have one organization responsible for the maintenance and updating of the community information system and to provide nonjudgmental information and referral. These responsibilities taken alone are inexpensive. However, if we add the active outreach and promotion tasks, the costs begin to go up.

In the conventional models of services delivery ***intake*** usually includes ***assessment***. Can there be an I&R function without prescreening and assessment? What will be the basis for referral other than minimal guidance and learner self selection?

The basic variables are inter-agency collaboration and information sharing. Legislation which requires this type of cross-agency collaboration would be useful. With the exception of some proposed federal legislation, the call for this

[33] *The Michigan Human Investment Fund and the Michigan Opportunity Card*, State of Michigan, January 1989.

[34] New Jersey has also adopted a common set of intake, vocational assessment and performance standards for all state funded programs in the employment and training system. See *Making America Work*, National Governor's Association, 1988, page 28.

type of local and state collaboration is not apparent except for the ***Adult Education Strategic Plan***.

(3) Decentralized System

With this option the local stakeholder groups would determine how to enact the community information services model, subject to general guidelines and standards. Since the nature and relationship of the stakeholders will vary from locale to locale, it seems more reasonable to let the key stakeholders determine the model.

The closest examples to this approach have been the CAP and the locally coordinated employment and training programs like JTPA. The programs operate, subject to program guidelines, with the actual providers and service configurations varying greatly from place to place. Overall outreach, I&R, assessment and MIS strategies will link the prime and subcontractors together into a service delivery system. The shortcoming, however, is that the delivery system is program-based and most likely does not bring in the myriad other community resources available.

The advantage of this approach is that it takes the local circumstances fully into account. The disadvantage is that it is sometimes difficult to get all the local stakeholder groups (called franchises in Michigan) to perform appropriately. However, this can be a problem regardless of the degree of local control.

Another advantage is that it minimizes the information services costs. However, it can leave the local eduction and basic skills training programs without a coordinated outreach strategy. This would be a necessary guideline if this option is adopted.

The future possibilities have been addressed. They are:

- Possible enabling legislation
- Modest technology changes
- Adoption of common performance measures

The common performance measures will give weight to this option. While the presumed technology will make little difference. It is difficult to say how legislation will impact this option.

FUNDING RESPONSIBILITY

Funding the community information services may turn out to be the most troublesome of the design-related issues. Traditional strategies assume that during the pilot phase there are special research and demonstration funds used, such as the federal Adult Education Act, Section 353 funds. The *California State Plan for Adult Basic Education* found that at the local levels there are "few mechanisms" to guide potential learners among the multiple programs available or to help them in making choices among the programs.[35] Creating this called community information services mechanism calls for (1) new inter-agency arrangements, (2) the creation of an elaborate computer database, (3) the standardization of the assessment process and assessment tools, and (4) methods to assess provider performance using cross-agency data. It clearly implies improving the outreach, I&R, and career guidance counseling functions. All these tasks require funds which, for the most part, are not allocated for these purposes.

Dr. Turock's research has led to the caution that these activities should not be entered into unless long-term funding is present. The policy issue is how to ensure a long-term funding base. Four options are presented which are not mutually exclusive. Hybrid options are reasonable. They are:

(1) **New State Legislation**

(2) **Assess Stakeholders Proportionately**

(3) **Seek Research and Demonstration Funds**

(4) **Assessment of Stakeholders for Selected Components.** Make each provider individually responsible for assessment and guidance, subject to uniform guidelines, and assess the stakeholders to pay for the outreach, I&R, and computer based information services components.

Each option is examined in the upcoming analysis. We suggest that the apparent permanence of the selected outcome is of central importance.

(1) New State Legislation

This option presumes that during the design and testing phase (1990-1993) new legislation can be passed to underwrite support for this set of community information service

[35] *California State Plan for Adult Basic Education*, Adult Education Unit, Division of Youth, Adult and Alternative Education Services, California Department of Education, June 9, 1989, Chapter 4, page 30.

functions. It assumes that the case can be made that these activities should be the subject of targeted legislation rather than administrative policy, guidelines or local initiatives.

The history for this approach comes from when federal legislation addresses the inclusion of community information type services, that state enabling legislation will use similar language. This suggests that federal activities often will drive the state legislation.[36] However, the percentage of GNP and total outlays that the federal government invests in human resources is at its lowest point since the mid-1960s when the War on Poverty programs were just being implemented.[37] This is not likely to change given our federal budget deficit.

The policy option paper on ***Funding for Today's Needs*** does not address the need for community information services resources *per Se*. Unless the interim steering committee takes this option on as a priority, there is little push evident from present quarters.

Amendments to the federal Vocational Education Act may strengthen the collaborative planning and stakeholder concepts explicit in the community information services functions. However, this is unclear at this writing.

In the short run it seems unlikely that the nature of community information services will be determined by federal or state legislation. It falls within the realm of administrative policy and program design.

(2) Assess Stakeholders Proportionately

In this approach stakeholders would provide personnel (guidance, I&R, and outreach) and/or funds to underwrite the community information services. This approach suggests that a designated information services sponsor would coordinate all the services implicit in the model. Their share would be based on their annual budgets and proportioned based on agreed upon measures.

We are not aware of models which have done this successfully for long periods of time. It is not unusual to loan personnel or "out-station" them with other agencies, but to agree to pay *pro rata* for coordination services, unless mandated or legislated, is unusual.

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[36] For example, a Ford Foundation Executive Panel just made a set of recommendations that included a call for state and local inter-agency youth councils to coordinate service delivery, share information, and maintain continuity and quality control in local programming. Similar recommendations are made from time to time by Blue Ribbon groups. *See The Common Good: Social Welfare and American's Future*, Ford Foundation Project on Social Welfare and America's Future, Ford Foundation, New York, May 1989, page 89.

[37] Sawhill, Isabel W. and Jason Juffras, "Financing Human Capital," the Urban Institute, draft chapter for *Investing in People: An Economic Strategy for the Nineties*, David W. Hornbeck and Lester M. Salamon, Editors, page 8.

This option will not work unless stakeholders are required to cooperate. The assessment and monitoring of provider performance is sufficiently controversial that stakeholders will be less likely to participate if their program performance is below the norm. Remembering the goal of long term stability and funding, this option seems doomed to failure.

Clear legislative, policy or administrative guidelines requiring local cost sharing will make this option more viable. However, it seems that for the most part it will be resented and therefore dysfunctional.

(3) Seek Funding for Research and Development

New public policy initiatives are often underwritten by demonstration funds. The *Strategic Plan for Adult Education* is being funded in this manner. The risk taken is that the initiative, once demonstrated, cannot be institutionalized because of the lack of ongoing funding. While research and development (R&D) funds can help test new concepts, the utility of using them as the primary source of innovation can be problematic.

Changes in public policy and service paradigms often begin either with experimental or pilot tests or with demonstration models. The tests are evaluated for utility and political acceptance. In the case of the community information services we have partial attempts to implement the model. Michigan and, in all likelihood, New Jersey are the best test cases along with the more passive interventions cited by Dr. Turock. In the state examples, the initiative came from the state level and, at least in the Michigan example, is being tested after becoming a policy initiative. The question of ongoing funding is not an issue. In the California case the policy testing is more prolonged, but the availability of long-term resources at this point less certain.

Using R&D funds makes sense in the pilot testing phase. However, the source of, or concrete strategy for, long-term funding should be reasonably certain by the time this testing begins.

The importance of this approach is self-evident, but can fall in the category of taking funds away from other service delivery. Ongoing R&D funding is not likely for information services. It is a concept given lip service, but little economic support.

(4) Assess Stakeholders for Selected Components

In this option the community service information functions are divided between the providers and the presumed coordinator of I&R, outreach and the information services database. This coordinator, probably, will be responsible for the public relations also. This means that providers must either provide or have access to assessment and career guidance counseling services.[38] This distributes the assessment and counseling within the service delivery network, and may make referral less impartial.

The actual outreach strategies can be centralized or decentralized. They should be based on an overall target campaign.

JTPA and GAIN programs assess learner needs and then work out an action plan. Referrals are then made based on the plan. Learning activities can happen in tandem (prevocational and vocational training for example) or sequentially. The difference is that the learning options and the assessment are program centered, rather than across the local universe of services.

This option has the distinct advantage of lessening resistance to the information services provider. Likewise the cost contributions would be less, though still required. Some costs from the information database can be recovered, especially if the employer community is an active participant.

This option is the same as Option 1 in Issue 1. It presumes a natural split between soft services (outreach, I&R, computer information services) and direct services like assessment and guidance. It also assumes that a multimodal availability of assessment and guidance or counseling services is more useful than a more centralized one. It is less expensive for the stakeholder providers unless they are not providing quality services currently.

The key to this option is the standardization of assessment and performance measures and the collaboration of providers in making the information routinely available.

RECRUITMENT OF LEARNERS

Adult education and basic skills training service providers usually have a particular service or set of services which they offer, and may have one or two learning populations with whom they are the most comfortable or successful. Changes in

[38] Adult schools are quite uneven in the exient to which they provide assessment and guidance services. This may mean new costs for some of them and the need to upgrade their learner support activities.

either may mean changes in approaches, personnel and even instructional strategies.[39] For the most part, there is little incentive to serve the most difficult learners other than professional responsibility, and disincentives for serving them. **Exhibit 9** outlines some learning service intervention options and their implications. They may be explicit or implicit in the way providers recruit and assist learners.

Part of profiling providers is understanding what they do, whom they serve and whom they best serve. This leads to adjusting services to meet needs and referring prospective learners to providers who may best serve their needs.

In addition there must be aggressive methods to outreach and recruit the hard to serve. These activities are often overlooked and can require substantial handholding. This function is the beginning end of the community information services.

While it is not a good idea to be too prescriptive in the early design activities, outreach as an important service should be discussed and debated. The objective is to systematically organize an outreach strategy and tactics which will be more effective in reaching the hard to serve.

Most reimbursement methods (ADA, JTPA performance based, GAIN) do not reward providers who actively seek to serve the most difficult learners (illiterate, ESL, homeless, ex-convicts). It makes it more difficult to reach out and serve the "underclass" and the developmentally disabled.

Active outreach is added as an information services function. This issue suggests three options to encouraging proactive outreach to serve the most difficult:

(1) **Centralize the Outreach**
(2) **Decentralize the Outreach**
(3) **Leave it to Local Determination**

Overall service needs assessment is not sufficiently addressed in the *Strategic Plan for Adult Education* (1989 Edition). While planning and joint decision making among stakeholders is implicit, the mechanism for determining learner needs and employer needs is not zeroed in on. While these mechanisms will be far from perfect, there should be consensus on outreach and service targets and priorities. Likewise referrals to providers should be based on prospective learner abilities.

[39] One of the outstanding features of adult basic education in California has been its ability to adapt to new service challenges like IRCA and GAIN. Computer managed instruction and the next generation of computer assisted instruction greatly facilitates this flexibility and the ability to serve very dissimilar learners in a learning lab setting.

Exhibit 9
PROGRAM INTERVENTION APPROACHES[40]

Program Targets	Strategic Features
1. Programs that serve the most people or largest problems.	Open door, mixed abilities, hard to target, most equitable.
2. Programs designed to reach those easiest to serve.	Better results, high yield, easy to plan; avoids greatest needs.
3. Programs designed for the quickest results.	High yield, short-term success; can be band-aid approaches; will not work with persons with serious deficits.
4. Programs aimed at those with the least accessible persons or problems.	Psychic rewards, expensive, poorer results, greater burnout, often overlooked.
5. Programs aimed at those with the most socioeconomic *potential, e.g.* middle class students.	Better results, higher yield, easy to plan; avoids greatest needs, skimming
6. Programs which require the longest sequence of projects or activities.	Expensive, better results, more dropouts.

(1) Centralize Outreach

The essential question is whether the outreach and recruitment of prospective learners, especially the disenfranchised, will be more effective and efficient if centralized and coordinated with one sponsor. The actual model can have persons detailed or "out-stationed" from provider agencies to be supervised by the outreach coordinator or as staff or agents of the coordinator.

Human resource development programs like JTPA and its predecessors, and the community action program have used both a centralized and decentralized approach to effective outreach.

This is an important dimension to the community information services. It presumes that special efforts must be

[40] Current funding makes it difficult to target resources to communities in need outside of targeted programs like GAIN, JTPA and IRCA. However, it is reasonable to assume that there can be a disparity between learner needs (service demands) and the level of services available. Consequently, data on learner needs should be developed and maintained within the community adult education information services database, as well as statewide.

taken to attract the most difficult to serve. Without centralizing this proactive service, the community information services may be less effective and less important.

The groups who are served by education and skills training programs change according to unemployment and population demographics. These demographics and the changing job market show that California is facing a basic skills crisis that requires serious attention.[41] It is important to develop a successful outreach capability, though its actual form seems less important

(2) Decentralize Outreach

This option would decentralize outreach among the stakeholders using provider intervention approaches, and targeted learners serve as the guidelines for their efforts. However, stakeholder planning would still set the goals and targets for outreach, leaving the means up to the providers.

Decentralized outreach seems more effective when it is provided by community based organizations with particular constituency groups.

The pros and cons are hard to assess. Some traditional education and basic skills providers are not experienced in proactive outreach. It would require them to get new staff. However, it may be less expensive than a centralized approach.

(3) Local Discretion Concerning Outreach

This option defers the decision to the local stakeholders with the understanding that outreach would be guided by local needs assessment and goal setting.

There has been a variety of approaches used in communities to carry out targeted outreach. It is difficult to say that any model is more or less successful because of the differences in communities, potential learners, and providers.

The need to build collaborative stakeholder relationships, and the unique nature of prior stakeholder relations in each California community suggests that local experience is the best guide for implementing this most important component. Given the vagaries of budgeting and collaborative planning, this decision is best left in local hands.

[41] *California State Plan for Adult Basic Education, Op. Cit.*, Chapter 4, pages 10-22.

LEVEL AND NATURE OF STAFFING AND TECHNOLOGY

All the policy options address the question of the scale and complexity of the community information services system. They are implicit in the preceding policy issues and explicit in this one. In order to make system design decisions, we must resolve the primary features that determine it: (1) staffing level, and (2) level of technology.

Our researched program models for the most part are low staff, low technology oriented with the exception of GEARS which utilizes a mainframe computer and a large number of case managers. However, we have determined that none of the models in the research are sufficient to guide the design of the collaborative infrastructure model and therefore the community information services system.

We have rejected the low staffing, low technology approach as being insufficient. This leaves three options which will clearly help shape the nature of the information services model. They are:

(1) **Low Staff / High Tech**
(2) **High Staff / High Tech**
(3) **High Staff / Low Tech**

(1) Low Staff/High Tech

This option assumes that the community information services can be organized, operated and maintained in an information context and that the learner-intake-advisor contact is not overwhelming and can be organized efficiently.

With this option staff, staff requirements, depending on how outreach is organized, will be for intake and referral personnel, several persons to maintain and update the computer based information system and guidance personnel who can be either paraprofessional or professional depending on their position descriptions.

The high end uses of technology is the subject of further research. We can expect that the information services hardware and software will rely on (1) microcomputer platforms, (2) some form of expert system software,[42] (3) more

[42] Expert system software uses rule processing to deal with incomplete, inaccurate and contradictory data and to solved problems using heuristics, rather than deterministic algorithms. Expert systems are typically composed of two parts: a knowledge base that contains data and rules and an inference engine that responds to the environment by scanning the rules in the knowledgebase for ones that relate to the current input and taking actions prescribed by the matching rules. Sophisticated search algorithms that limit the range of possible rules that must be considered are crucial elements in expert system technology. In the case of community information services, as more information on learner characteristics, motivation and performance information is accumulated in the

advanced forms of digital information storage and presentation such as optical media and multimedia, and the peripheral technology to read and write the *EduCard*™, and (4) possibly some machine based problem solving tests to benchmark certain competencies.

The attraction of this option is that it reduces the major on-going information services cost - personnel. The major possible drawback is that it will not provide an environment where potential learners will feel comfortable either because of the impersonal machine orientation or because the personnel are not sufficiently helpful, personable or communicative.

A commitment to this option as the way to start may prove the most pragmatic, since the personnel can be added as experience dictates. On the other hand, once staffing patterns are set, it may prove to increase them even with a demonstrated need.

(2) High Staff/High Tech

This option represents the high end, high cost, high quality approach. It presumes that there is a strong correlation between the number and type of staff and the degree of technological sophistication, and the resulting higher quality of learner services.

The clear advantage of this approach is that individual learners will receive substantial personal, in-depth attention; and this attention will result in better learning services. The drawback is that the resources, with all things being equal, may be better spent on other parts of the basic skills learning system.

(3) High Staff/Low Tech

This option presumes that the quality of the human interaction is key to the success of the information services system and that a substantial level of personnel, whether paraprofessional or professional, will clearly improve service delivery. It also presumes that the information technology is not too important and can function much along the lines described in the library I&R models.

The strength of this option is its emphasis on the quality of the learner-intake-guidance counselor interaction and this function should be quite professionalized. It implies that the actual quality of the information services data are not too

knowledge base, these heuristic programs can become more accurate in assessing needs and recommending courses of action, given the available program choices.

important and in all likelihood will be difficult to keep current and maintain them at a high quality.

The weakness of this option rests with the presumption that there will be plenty of work for staff, especially professional staff to do, and that there is a strong need for professional personnel. Much of the guidance and general counseling can be carried out by trained paraprofessionals and persons who themselves are role models for the learners. The uneven flow of persons through the information services may prove that a minimal staff with general skills is preferable to a larger staff.

Overview of Options

There are four basic issues identified which begin to define the features of the community information services. With each issue several options are presented, with the understanding that they could stimulate other issues and options. They are:

Issue 1: **Community Information Services System Model**

(1) Centralize the Information System - *Centralize all the functions with one sponsor.*

(2) Centralize Information Services and Decentralize Assessment, Placement and *EduCard*$_{TM}$ Issuance - *Centralize the information services and decentralize the other functions.*

(3) Let Local Stakeholders Decide - *Set the overall goals and standards and let the local stakeholder groups decide.*

Issue 2: **Funding Community Information Services**

(1) New State Legislation

(2) Assess Stakeholders Proportionately

(3) Seek Research and Development (R&D) Funding

(4) Make Stakeholders Responsible, but Assess for Information and Referral, and Computer Database

Issue 3: **Encourage Proactive Outreach**

(1) Centralize Outreach

(2) Decentralize the Outreach Activities

(3) Let Local Stakeholders Decide

Issue 4: Determine the Level and Nature of Staffing and Technology

(1) Low Staff/High Tech
(2) High Staff/High Tech
(3) High Staff/Low Tech

In the next section these issues and options are examined against common evaluation criteria, and their pros and cons discussed.

Criteria for Evaluation of Options

We have decided to use the same criteria for the core infrastructure of the service information system. They are a balance between efficiency and effectiveness measures. These criteria are:

(1) Improve Learner Access
(2) Stakeholder acceptability
(2) Ease of use
(3) Maintains learner privacy
(4) Cost-effective
(5) Improve Accountability

While there is some implied overlap among the criterion, they represent the critical features that determine. **Exhibit 10** outlines the criterion and their basic features.

In the next subsection **Exhibit 12** evaluates each proposed option with these criteria using three measures. In addition to these criteria there are two other measures which we apply to the issues and options.

Comparison of Pros and Cons of Alternative Approaches

This subsection details several descriptive analyses of the proposed issues and options and their relative strengths and weaknesses. It culminates with a summary analysis of the likely impacts of the thirteen options (**Exhibit 12**).

Exhibit 10
CRITERIA FOR EVALUATING THE COMMUNITY INFORMATION SERVICES OPTIONS

IMPROVE LEARNER ACCESS:

- **Eases Assessment and Referral**
- **Reduce Paperwork**
- **Increases Program Choices**

STAKEHOLDER ACCEPTABILITY:

- **Minimize Administrative Burden**
- **Reduce Paperwork**
- **Improve Performance Measurement**

EASE OF USE:

- **Minimal Staff Training and Retraining**
- **Automated Electronic Reporting**
- **Built In Security**

MAINTAIN LEARNER PRIVACY:

- **Password Protection**
- **"Need To Know" Access**

COST EFFECTIVENESS

- **Minimize Information System and Data Collection Costs**
- **Minimize Hardware and Software Conversion Costs**

IMPROVE ACCOUNTABILITY:

- **Improves Performance Measurement**
- **Standardizes Data Collection**
- **Reduces Analysis Costs**

COST-BENEFIT IMPACTS

In addition to the overall evaluation criteria, we have identified an initial set of prospective costs and benefits which can be attributed to the community information services. They are descriptive in nature. As analysis continues in the next paper, actual cost ranges can be attached to them.

The benefits derived from an effective and efficient community information services system are set forth in **Exhibit 11**.

Subjective analysis suggests that the options which address the benefits criteria are:

Exhibit 11
BENEFITS CRITERIA FOR COMMUNITY INFORMATION SERVICES

1. **Coordinated Outreach**
2. **Better learner services**
3. **Better program and service data**
4. **Intake and assessment more learner sensitive**
5. **More complete program and learner information**
6. **Coordinated guidance and career counseling**
7. **A more uniform assessment system**
8. **Program performance information**
9. **Employer links**

Issue 1
Community Information Services System Model

Option 1A: Centralize the Information Services

The chances of success are estimated to be the highest with the centralization of community information services responsibilities. This is because one sponsor can better coordinate services and retain quality control.

Issue 2
Funding Information Services

Option 2C: Seek Research and Demonstration Funding

This is strictly a judgement call. It assumes that the research and development (R&D) funds will be the least restrictive, thereby permitting the model to be more readily implemented. However, previous research indicates that it is sometimes hard to move from R&D to institutionalized funding.

Issue 3
Recruitment of Learners

Option 3A: Centralize Outreach

This option optimizes effective outreach strategies and intake-assessment methods by retaining the responsibility with one designated agent.

Issue 4
Level and Nature of Staffing and Technology

Option 4B: High Staff/High Tech

This option maximizes the availability of personnel and tools to serve the learner. It goes hand in hand with the centralized--one sponsor approach with the role of the information center(s) being neutral in assessment and referral, but proactive in outreach and intake.

COSTS OF OPERATION AND NEGATIVE IMPACTS

Issue 1
Community Information Services System Model

Preliminary analysis suggests that centralizing the community information functions will be more expensive in the short run, but may have a better chance of success. They will be more expensive because new staffing, new functions, new computer equipment and new responsibilities will be centralized with one sponsor. Some of these costs can be minimized by personnel sharing, personnel loans or outstationing.

The most likely negative impact with the complete centralization of community information services is that the commitment may be less than enthusiastic on the part of some or all of the stakeholders. In other words, it is an imposed approach and will succeed only as long as funds are available for it.

On the other hand the decentralization of the community information service functions will be less expensive, but there is a greater likelihood of quality control problems and neutrality in serving the learner's needs. The trade off is cost savings versus quality control. The absence of local commitment because the decision has been predetermined may also impact service quality.

Issue 2
Funding Information Services

The research and development option, in the short run, is the least expensive to the local providers and the most likely to be available.

Issue 3
Recruitment of Learners

Decentralizing outreach is the least expensive, assuming that service providers each carry out designated outreach responsibilities. Not all learner groups need be actively recruited. But it is important to reach to those most at risk--the functional illiterates, immigrants, and recent dropouts. Basic skills programs serving those groups should have a coordinated outreach approach.

ACCEPTABILITY TO STAKEHOLDERS

The costs and negative impacts of letting local stakeholders determine the model are the least clear. There should be a greater commitment to the model because it is locally determined. However, without a clearly defined long term source of financing, these services can be eroded over time. Quality control can be a major concern here, but must be balanced with the local acceptance and commitment.

The primary argument for decentralizing the decision making is the acceptability to stakeholders and their long term commitment to an effective community information services strategy. This argues for clearly defined guidelines and standards for the outreach, intake, assessment, provider information and pre-post outcomes data.

Information and referral types of activities, and efforts to develop more comprehensive program information service systems have been frustrated by competing guidelines and program requirements of participating agencies.

OTHER CONSIDERATIONS

Information and referral types of activities, and efforts to develop more comprehensive program information service systems have been frustrated by competing guidelines and program requirements of participating agencies. There are numerous reasons, usually linked to funding, to give lip service to coordination but be minimally supportive. Anyone who has participated on inter-agency or inter-program planning can attest to this.

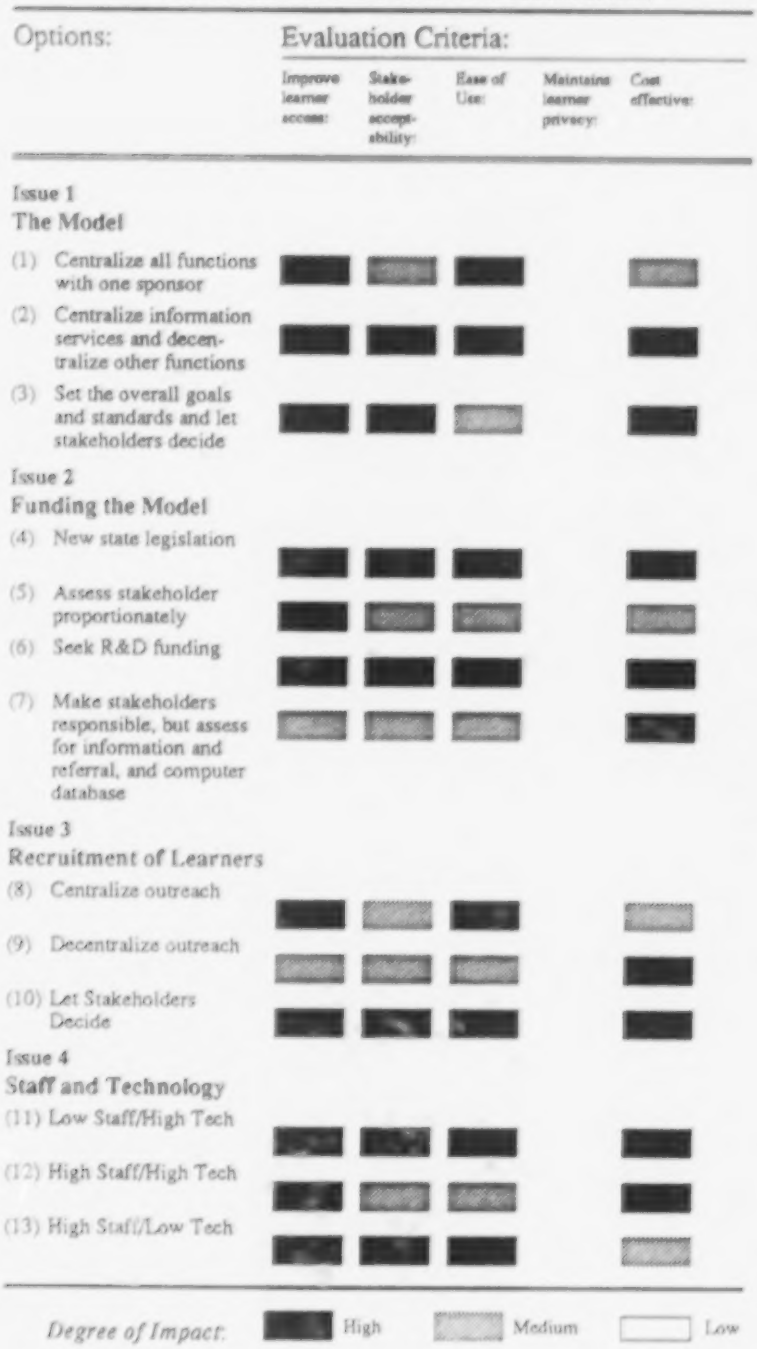
Our evaluation of the available options must take this into consideration. The options we adopt must maximize the chance that the community information services, an activity often shortchanged when funds are tight, has a strong base of local support as well as clear guidance in its design.

CROSS-MATRIX ANALYSIS AND DISCUSSION

The preceding analyses, assumptions and predispositions are summed up in **Exhibit 12**. Readers and advisors are encouraged to express their own opinions and suggestions. We must be careful not to overlook the obvious or less than obvious issues and options available.

The tentative conclusion is that there are substantial trade offs between efficiency (the most cost effective approach) and effectiveness (the approach with the most impact). The basic choices seem to rest between a centralization with one sponsor and letting the stakeholders make the determination locally.

Exhibit 12
ILLUSTRATIVE CROSS-MATRIX COMPARISON OF OPTIONS VIA COMMON CRITERIA



NOTE: Assessments within each criteria should also include negative impacts (*e.g.* moderate negative impact and strong negative impact).

Chapter 4

Proposals and Future Actions

The four proposals and the upcoming feasibility analysis will refine the community information services model and improve planning and coordination.

This paper addresses fundamental policy issues that will guide the development of the California community information services model.

The process for developing, reviewing and enacting the strategies and short term policies will have four reoccurring steps in which policy options and proposals are developed, reviewed by agency heads for their acceptability, and then adjusted until they are acceptable to the heads of collaborating agencies.

The further development and analysis of the recommended community information services issues and options will be performed by the Adult Education Institute for Research and Planning under the guidance of the Interim Steering Committee and its subcommittees. The four proposals presented in this paper will be reviewed, revised and analyzed further during the feasibility analysis to gain clarity, acceptance to basic skills agencies, the business community, learners' groups and other stakeholders.

Any policy recommendations of the Interim Steering Committee will need to be reviewed by State Superintendent of Public Instruction, Bill Honig, and California Community College Chancellor, David Mertes, as well as heads of other participating agencies. The Institute staff and consultants will work under the guidance of the Interim Steering Committee to reconcile the requirements, concerns and differences of participating agencies.

This review and discussion process is designed as a progressive cycle of public comment and dialogue among agency heads, Steering Committee Members and Institute personnel.

Proposals

Four proposals are made to refine the community information services design. A balance is struck to select parameters that are effective, cost efficient and acceptable to stakeholders. The evaluation criterion reflect this balance. The importance of learner privacy is stressed as a criterion, but does not impact the proposals at this point.

The proposals are set forth in **Exhibit 13** and discussed in detail in the shaded boxes.

Exhibit 13
BENEFITS CRITERIA FOR COMMUNITY INFORMATION SERVICES

- **Centralize the information services functions with one sponsor.**
- **Seek research and demonstration funds to test the system.**
- **Use local discretion concerning outreach**
- **Use a low staff and high technology approach in developing the community information services.**

Specification on these four proposals are provided below.

THE COMMUNITY INFORMATION SERVICES MODEL

We recommend that the provision of community information services in the feasibility analysis, paper model and adoption steps be the responsibility and purview of one organization. This centralizes the functions or the coordination of the functions with a clearly designated agency. If the agency determines that particular functions should be subcontracted, delegated or otherwise coordinated, it is up to local choice.

Proposal 1
CENTRALIZE COMMUNITY INFORMATION SERVICES WITH ONE AGENCY

The community information services play four important functions: (1) planning and describing programs; (2) use and control of the *EduCard*$_{TM}$; (3) assessment and placement of learners; and (4) outreach and intake. Centralizing these services will:

- Maintain quality control.
- Provide a neutral service.
- Monitor labor market needs and program performance.
- Help standardize the assessment process.

Maintaining the combined learner based and computer based information services with one agency will be an important towards standardizing intake and assessment approaches and targeting learner outreach as local conditions dictate.

FUNDING RESPONSIBILITY

While it is very early to consider how the community information services models will be funded when operational, the manner in which they are likely to be funded can constrain their planning. We recommend that research and demonstration funds be used to actualize the models. This option is the most pragmatic approach to addressing the complex design and collaborative concerns that arise out of the model.

Proposal 2
SEEK RESEARCH AND DEMONSTRATION FUNDS TO BEGIN TO IMPLEMENT THE MODEL

The community information services requires new thinking and collaboration among stakeholders. This option provides the most design and development flexibility to:

- Forge new inter-agency arrangements.
- Develop community level database.
- Standardize learner assessment process and tools.
- Develop the means to monitor provider performance.

RECRUITMENT OF LEARNERS

Outreach to hard to serve learner groups takes on greater importance with California's ten year goal to reduce illiteracy.

This may require a more proactive approach than previously used. We recommend that the approach to targeted outreach be a matter of local discretion, guided by community level needs assessment and goal setting.

Proposal 3
LOCAL STAKEHOLDERS SHOULD DETERMINE THEIR APPROACH TO OUTREACH

Local conditions and needs vary greatly regarding the need and approaches to learner outreach and recruitment. A truly proactive approach requires local stakeholder design to:

- Identify local learner needs.
- Develop sensitive strategies to recruit and retain them in learning services.
- Assess and modify the approaches as needs and outreach results dictate.

The emphasis on a context sensitive approach, guided by stakeholder experience is the best approach to insuring an appropriate outreach strategy. The history of local experience and knowledge cannot be overlooked.

THE LEVEL AND NATURE OF STAFFING AND TECHNOLOGY

This is a difficult question that could be left for the feasibility study. Experience suggests that substantial levels for the community information services functions will never be substantial. Further, it is possible to standardize assessment and career guidance activities without considerable professional personnel. We recommend that the feasibility analysis and paper model development assume a low staff - high tech approach that does not diminish or trivialize the importance of personal contact with potential learners.

Proposal 4
LEVEL AND NATURE OF STAFFING AND TECHNOLOGY

The least cost approach seems the most appropriate. Substantial flexibility can drive how local information services systems provide outreach, intake and assessment, guidance and referral, and employer and information management services. This approach suggests:

- Important paraprofessional responsibilities.
- Using computer-based technologies to help guide the intake, assessment, testing and referral process.
- Integrating the personalized human services and information services as much as feasible

This is a value-laden proposal. It draws from the experiences in our background and literature research and presumes that there should be a balance between the personalized and the computerized uses of service and needs information.

Advisory Recommendations

The preceding proposals have been reviewed by the Data and Information Subcommittee of the Interim Steering Committee.[43] Based on this review, a number of additions, clarifications and changes have been made to staff proposals. As a result there are three new proposals and revisions to several others. The advisory recommendations as revised are:

ACTION ON PROPOSAL 1
(New Proposal)

Adopt New Proposal 1. This new proposal recognizes that state standards should be set that define minimum content for Community Information Services. However, local stakeholders should be able to add to those standards as necessary. The new Proposal 1 is to read as follows:

Proposal 1
CREATE A STATE-LOCAL COMMUNITY INFORMATION SERVICES SYSTEM WITH OPTIONS FOR LOCAL AUGMENTATION

Community information services should be one component in an integrated adult education information system. State standards should determine the minimum content and definitions for data elements which can be augmented by local stakeholders. This state-local network will:

- Set information services standards.
- Set local services boundaries.
- Set data and information services definitions.
- Review and revise standards as needed.

[43] Members of this subcommittee in alphabetical order are: Charles Carlson, Dean of Instruction, Bakersfield College; Ronald Gristock, Vice President, Community Affairs, Wells Fargo Bank, San Francisco; Thomas Johnson, Assistant Superintendent, Hacienda La Puente Unified School District, La Puente; Henry Page, Principal, Palo Alto Adult School; Dick Ranes, Unit Manager, IBM, Costa Mesa; Frances Ruiz, ESL Teacher, Corona-Norco Adult School; Prany Sananikone, Assistant Director, United Cambodian Community, Inc., Long Beach; and Gary Strong, State Librarian, California State Library, Sacramento.

ACTION ON PROPOSAL 2
(Originally Proposal 1)

Accept Proposal 2 (with minor revisions). Revise Proposal 2 to read as follows:

Proposal 2
CENTRALIZE COMMUNITY INFORMATION SERVICES MANAGEMENT AND MAINTENANCE UNDER ONE AGENCY SUBJECT TO STAKEHOLDER GUIDANCE

The community information services play five important functions: (1) collect and standardize information describing programs; (2) use and recall *EduCard*$_{TM}$ data; (3) intake, assessment and counseling of learners; (4) provide information about programs to learners, and (5) refer learners to programs. Centralizing these services will:

- Maintain quality control.
- Provide a neutral service.
- Assist monitoring of program performance, labor market needs, and demand for programs.
- Standardize the assessment and referral process.

ACTION ON PROPOSAL 3
(Originally Proposal 2)

Accept Proposal 3 (as proposed).

Proposal 3
SEEK RESEARCH AND DEMONSTRATION FUNDS TO BEGIN TO IMPLEMENT THE MODEL

The community information services requires new thinking and collaboration among stakeholders. This option provides the most design and development flexibility to:

- Forge new inter-agency arrangements.
- Develop community level database.
- Standardize learner assessment process and tools.
- Develop the means to monitor provider performance.

ACTION ON PROPOSAL 4
(Originally Proposal 3)

Accept Proposal 4 (with revision as indicated). Change the first word of the proposal from "LET" to "ENABLE". The proposal is to read:

Proposal 4
ENABLE LOCAL STAKEHOLDERS TO DETERMINE THEIR APPROACH TO OUTREACH

Local conditions and needs vary greatly regarding the need and approaches to learner outreach and recruitment. A truly proactive approach requires local stakeholder design to:

- Identify local learner needs.
- Develop sensitive strategies to recruit and retain them in learning services.
- Assess and modify the approaches as needs and outreach results dictate.
- Coordinate Statewide media and outreach with promotional efforts tailored to serve local recruitment needs.

ACTION ON PROPOSAL 5
(Originally Proposal 4)

Accept Proposal 5 (with revisions). Amend Proposal 5 to read as follows:

Proposal 5
ADOPT A COMMUNITY INFORMATION SYSTEM WITH APPROPRIATE MIX OF STAFF AND TECHNOLOGY

A community information systems model should be adopted that reflects a "least cost" approach where a low level of staffing and a substantial commitment to information technology is utilized. There should be maximum flexibility in the overall management of information services including outreach, intake and assessment, guidance and referral, and program and employer information. This approach suggests:

- Important paraprofessional responsibilities.
- Using computer-based technologies to help guide the intake, assessment, testing and referral process.
- Integrating the personalized human services and information services as much as feasible.
- A fully integrated statewide "electronic" information highway.
- The growing importance of labor saving technology.

ACTION ON PROPOSAL 6
(New Proposal)

Adopt New Proposal 6. In order for Community Information Services to be effective, language and cultural differences must be taken into account. This proposal recognizes these factors and stresses their importance in the initial development of Community Information Services. The new Proposal 6 is to read as follows:

> Proposal 6
> **DESIGN THE COMMUNITY INFORMATION SERVICES TO SERVE THE NEEDS OF OUR DIVERSE LANGUAGE AND CULTURAL COMMUNITIES**
>
> The diversity of California must be reflected in easy access to the community information services. Options for multi-lingual computer screen, new voice recognition, and multi-channel digital audio capabilities. The basic system design will ensure multi-lingual capacity and capability."

ACTION ON PROPOSAL 7
(Originally Proposal 6 of Policy Option Paper 4)

Accept Proposal 7 (as presented) with: (1) appropriate personal contact (one-to-one contact with adult learners), (2) provide multi-lingual access using technology and community resources, and (3) develop an access point for senior citizens. (This proposal was originally Proposal 6 of Policy Option Paper on the *EduCard*$_{TM}$.) Proposal 7 is to read as follows:

Proposal 7
ADOPT AND ADAPT PROCESS OF CDE CAREER ASSESSMENT MODEL

The three stage assessment process of the CDE Career Assessment Model should be *adopted and adapted* for use in *Community Adult Education Information Services*. The adapted Model would cover a broader range of skills and programs than the "career/vocational" focus of the original Model. Adult learners' goals and needs would be assessed, program information would be made available for review, and assistance would be provided in the setting of goals and the selection of appropriate programs and services. Assessment activities would be delivered in the following three stages:

Stage 1: Preliminary Goal Setting and Screening: Adults access *Community Adult Education Information Services* through interaction with computer terminals at various locations. A computer program and database provides information about services and allows individuals to self-assess their needs and goals.

STAGE 2: Intermediate Assessment and Goal Setting: Adults are interviewed and detailed information is collected at an assessment center in an up to half-day period. Formal and informal skill and aptitude assessment are conducted to ascertain individuals' skill levels, needs, and goals.

STAGE 3: Extended Assessment and Intensive Goal Setting: Intensive assessment and goal setting activities are carried out over an extended period (one day or longer) where skills and needs are assessed through adults' demonstration or exploration of skills (competencies).

At the end of each stage, learner characteristics are analyzed according to a predetermined set of "readiness" criteria. Adults who have clearly defined goals and/or have the necessary prerequisite skills are directly referred to appropriate programs. Adults who are unclear about their goals, have insufficient skill levels, or who need more program information in order to select appropriate programs are referred to the next stage for more intensive assessment. At all levels, assessment activities will be made available in languages other than English through a multi-lingual database and community resources. Access will be assured for senior citizens.

Proposal 7
Discussion

In 1985-86, the California Department of Education (CDE), Specialized Programs Branch was commissioned to develop a comprehensive, branch-wide career/vocational assessment model. The *Agency-based Vocational Assessment Model* was developed to provide guidelines and step by step process for career assessment and planning for students served by adult education, special education, vocational education, at-risk youth, and high school counseling programs. The Model structures the career/vocational assessment process into three discrete Stages. Various levels of assessment are provided depending on the learner's degree of "readiness." At any given stage, learners who are assessed as "ready" are referred for training or placement. However, individuals who are deemed to be "not ready" are referred for more assessment. This process enables education and training programs to provide only the assessment that individual learners needs. By so doing, more time and resources can be allotted to individuals who really require more intensive assessment.

It is proposed that the step by step, multi-stage process of the *Agency-based Vocational Assessment Model* be adapted for use in *Community Adult Education Information Services*. The adapted Model would cover a broader range of skills and programs than the "career/vocational" focus of the original Model. The adapted Model would cover assessment and planning for all adult education options including Adult Basic Education (ABE), English as a Second Language (ESL), High School Diploma, Citizenship, Parent Education, and Older Adult programs, as well as career and job training programs.

The adapted Model will provide guidelines and criteria by which to determine the amount and nature of assessment and planning activities to be provided to adult learners. At every level of the assessment process, some form of one-to-one personal contact between adult learner and adult education representatives will be made available. Assessment activities will be made available to individuals who speak languages other than English through the a multi-lingual database and utilization of community resources. Access will also be assured for senior citizens.

Depending on the needs of the individual adult learner, the adapted Model would lead to the following outcomes: (1) identification of goals, (2) assistance in setting of goals, (3) assessment of skills and aptitudes, (4) information on for review of program options, (5) guidance towards selection of appropriate program. The proposal follows:

This adaptation of the CDE *Agency-Based Vocational Assessment Model* will provide an assessment and planning process *for Community Adult Education Information Services.* Assessments at all levels will utilize a computer network and database containing information about available programs and services and previously collected information about individuals. Various levels of assessment will be made available depending on adults' needs and goals. Specific activities for the three Stages are as follows:

STAGE 1:
Preliminary Goal Setting and Screening

Adults make initial contact with *Community Adult Education Information Services* by interacting with computer terminals at various locations. A database provides information about available services and a computer program allows learners to self-assess their needs and goals by answering questions. Previously unserved adults may access *information services* at computer terminals located at "neutral" (not having to do with school) locations in the community including libraries, supermarkets and malls. Individuals who are already employed or enrolled in education or training programs may access *information services* by interacting with computer terminals located at respective locations.

Information may be collected from adults in two ways. First, the adult may answer questions about his/her personal and educational background, work experience, and goals using an interactive computer program. Second, information on the individuals contained in the database may be accessed via the adult's *EduCard* ™. Based on analysis of inputted information or information on the *EduCard* ™, the software program identifies the adult education programs and services that appear to be most appropriate for the individual.

If the individual has clearly identified his/her goals and appears to meet the prerequisite requirements, then the software program prints out a referral slip that enables direct access to the program by the individual. If the person appears to be "not ready" (according to pre-selected criteria) or if more information is needed before an appropriate program determination can be made, the adult is referred to Stage 2 for more assessment.

STAGE 2:
Intermediate Assessment and Goal Setting

The adult checks in to assessment center and receives short term assessment (up to a half-day) process. The individual receives an interview and detailed information is collected. If needed, formal and informal skill and aptitude assessments are conducted to ascertain individuals' skill levels, needs, and goals. Formal tests may include paper-pencil basic skills tests or "hands-on" career/vocational aptitude tests, depending on the individual's goals. To assist in goal setting, vocational interest inventories and self-directed career assessments (interactive computer programs) will be available. Assessment results are reviewed and discussed with the individual by a counselor and an individual plan is developed.

If adults appear to ready for referral, arrangements are made for placement to a program. If the individual still is not ready to commit to a program or more information is needed to determine appropriate placement, the individual is referred for Stage 3 assessments.

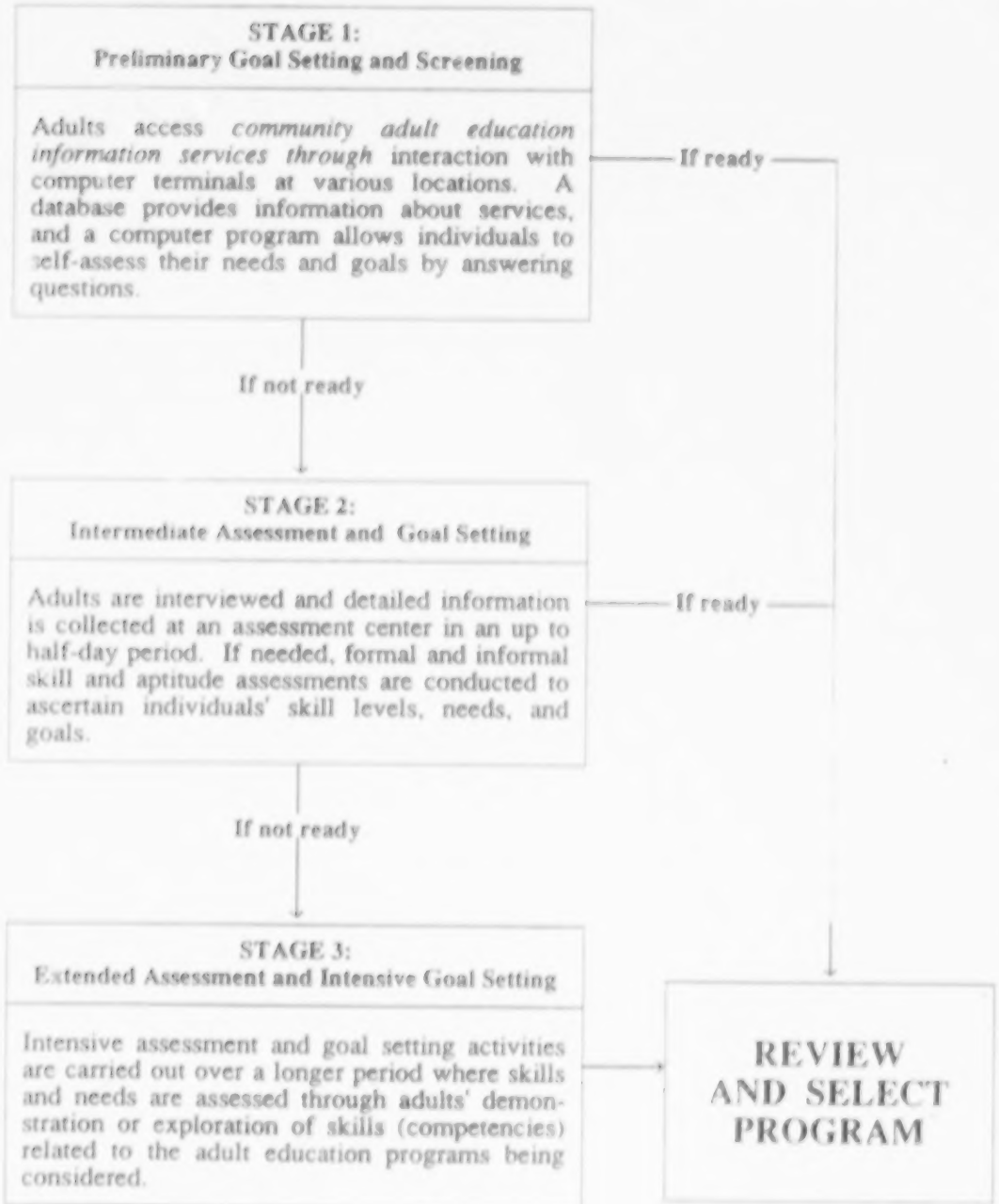
STAGE 3:
Extended Assessment and Intensive Goal Setting

An extended assessment (one day or more) is conducted at an assessment center to determine adults' needs and goals. Assessments feature "hands-on" applied performance testing where the individual is asked to demonstrate his/her skills in real or simulated program settings. This approach implies that the individual will be given an opportunity to experience or demonstrate skills or behaviors related to specific programs in which he/she is interested. These activities help identify needs and related support services that may be required to enable the individuals to succeed.

Counselors review assessment results with the individual and an individual plan is developed. Arrangements and referrals are made for appropriate placements.

A flow chart describing the three stage intake process for *community adult education information services* is presented on the next page.

Exhibit 14
COMMUNITY ADULT EDUCATION SERVICES: ASSESSMENT AND GOAL SETTING MODEL


STAGE 1:
Preliminary Goal Setting and Screening
Adults access *community adult education information services through* interaction with computer terminals at various locations. A database provides information about services, and a computer program allows individuals to self-assess their needs and goals by answering questions.
If ready
If not ready
STAGE 2:
Intermediate Assessment and Goal Setting
Adults are interviewed and detailed information is collected at an assessment center in an up to half-day period. If needed, formal and informal skill and aptitude assessments are conducted to ascertain individuals' skill levels, needs, and goals.
If ready
If not ready
STAGE 3:
Extended Assessment and Intensive Goal Setting
Intensive assessment and goal setting activities are carried out over a longer period where skills and needs are assessed through adults' demonstration or exploration of skills (competencies) related to the adult education programs being considered.
REVIEW AND SELECT PROGRAM

These refinements and additions made by the Data and Information Subcommittee reflect the deliberations of the subcommittee. They add specificity and detail to the seven proposals.

Future Action

The next step is to research the feasibility of developing the community information services system. Feedback from the Steering Committee and the agency administrators will guide us. In particular we will continue to refine the issues and analysis by:

- Continuing to research viable models and elaborating its features.
- Examining the technical feasibility of the system.
- Assessing the usability and political feasibility of the model.
- Detailing legal and statutory issues and conditions.
- Defining the costs of the development and operations of the model within a five year context.

The time period for this feasibility analysis is about four months. The pace quickens, but crucial decisions are made.